1963-1964

GRADUATE CATALOG
Directions for Correspondence

In order to expedite the answering of inquiries, the names of the administrative officers, together with the divisions of the University which come under their supervision, are listed below.

**General Policy of the University**
Leslie A. Holmes, President

**Graduate School Admission and Requests for Information**
C. Norton Coe, Dean of the Graduate School

**Transcripts, Academic Records**
George S. Pritchard, Registrar

**Student Employment**
Harold E. Husa, Dean of Men
Ruth Haddock, Dean of Women

**Scholarships, Loans, and Other Financial Aids**
Philip L. Shields, Coordinator of Student Financial Aids

**Housing**
James M. Burgoyne, Director of Housing

**Veterans' Services**
Harold E. Husa, Dean of Men

**Payment of Fees**
Z. H. Dorland, Director of Business Services

**Teacher Placement**
Martin H. Bartels, Director of Placement

**Student Health**
Dr. Otto J. Keller, Director of the Student Health Service

**Extension Courses**
Joseph E. Clettenberg, Director of Extension

**Student Teaching Assignments**
Max S. Huebner, Director of Student Teaching

**Public Relations and Alumni Affairs**
William P. Froom, Director of Regional Services

**Summer Session**
Damon D. Reach, Director of the Summer Session

**Instructional Materials**
Robert J. Hunyard, Director of Instructional Materials

**Evening College**
Virgil W. Alexander, Dean of the Evening College

**Institutional Research**
Charles E. Howell, Director

**Professional Publications**
E. Nelson James, Director
NORTHERN ILLINOIS UNIVERSITY

DeKalb, Illinois

Graduate School

GRADUATE CATALOG
1963-1964
Graduate School Calendar, 1963-1964

### June 1963

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### August 1963

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### Summer Session, 1963

- **June 17, Monday**: Registration 8:00 A.M.-3:30 P.M.
- **June 18, Tuesday**: Class work begins at 8:00 A.M.
- **June 20, Thursday**: Last day for filing petition for admission to candidacy for August graduation
- **June 21, Friday**: Last day for notifying department head in writing of intent to take comprehensive examination for August graduation
- **June 22, Saturday**: Last day for filing in the Registrar's Office application for August graduation
- **June 28, Friday**: Last day for applying to the Graduate Office in writing for a partial refund of fees for dropping a course or withdrawing from the University
- **July 4, Thursday**: Holiday
- **July 6, Saturday**: Last day for filing in the Graduate Office graduation clearance Form II for August graduation
- **July 8, Monday**: First day of comprehensive examinations for August graduation
- **July 19, Friday**: Last day for filing thesis for August graduation
- **July 29, Monday**: Last day of comprehensive examinations for August graduation
- **August 2, Friday**: Last day for notifying Graduate Office in writing of intent to drop a course or withdraw from the University without penalty for failing work
- **August 8, Thursday**: Commencement 4:00 P.M.
- **August 9, Friday**: Summer Session closes after regularly scheduled classes
- **August 12, Monday**: Start of 3-week session
- **August 30, Friday**: Close of 3-week session

### First Semester, 1963-1964

- **September 14, Saturday**: Registration for Saturday and evening classes 8:00 A.M.-12:00 noon
- **September 14, Saturday**: Class work begins 9:00 A.M.
- **September 16, 17, Monday, Tuesday**: Registration 8:00 A.M.-6:30 P.M.*
- **September 24, Tuesday**: Last day to change programs
- **September 28, Saturday**: Last day for filing petition for admission to candidacy for January graduation

*Registration offices remain open late enough during the first week of classes to accommodate evening students. After the first week these offices close at 5:00 P.M. Since registration for evening and Saturday classes closes with the second meeting of each class, late registrants for an evening class must complete registration before 5:00 P.M. of the day when class meets for the second time.
### First Semester (Continued)

September 28, **Saturday** ....... Last day for filing in the Registrar’s Office application for January graduation

September 28, **Saturday** ....... Last day for applying to the Graduate Office in writing for a partial refund of fees for dropping a course or withdrawing from the University

October 11-13, **Friday-Sunday** .......... Homecoming

October 12, **Saturday** .......... Last day for filing in the Graduate Office graduation clearance Form II for January graduation

November 8, **Friday** ....... Last day for notifying department heads in writing of intent to take final comprehensive examinations. Students should obtain from the department head the date on which the examination is to given.

November 18, **Monday** ....... First day of comprehensive examinations for January graduation

November 27, **Wednesday** .......... Thanksgiving recess begins at 12:00 noon

December 2, **Monday** ....... Class work resumes at 8:00 A.M.

December 14, **Saturday** .......... Last day for filing thesis for January graduation

December 14, **Saturday** .......... Thanksgiving recess begins at 12:00 noon

December 2, **Monday** ....... Class work resumes at 8:00 A.M.

December 14, **Saturday** .......... Last day for filing thesis for January graduation

December 14, **Saturday** .......... Christmas recess begins after regularly scheduled classes

### 1964

January 2, **Thursday** ....... Class work resumes at 8:00 A.M.

January 4, **Saturday** ....... Last day for notifying Graduate Office in writing of intent to drop a course or withdraw from the University without penalty for failing work

January 15, **Wednesday** ....... Last day of comprehensive examinations for January graduation

January 20-24, **Monday-Friday** .......... Undergraduate examinations

January 21-23, **Tuesday-Thursday** .......... Saturday and evening class examination

January 25, **Saturday** .......... Close of first semester
Graduate School Calendar, 1963-1964

**Second Semester, 1963-1964**

- **February 1, Saturday**...........Registration for Saturday and evening classes 8:00 A.M.-12:00 noon
- **February 1, Saturday**...........Class work begins
- **February 3, 4, Monday, Tuesday**...........Registration 8:00 A.M.-6:30 P.M.*
- **February 11, Tuesday**...........Last day to change programs
- **February 15, Saturday**...........Last day for filing petition for admission to candidacy for June graduation
- **February 15, Saturday**...........Last day for filing application for June graduation
- **February 15, Saturday**...........Last day for applying to Graduate Office in writing for a partial refund of fees for dropping a course or withdrawing from the University
- **February 29, Saturday**...........Last day for filing in the Graduate Office graduation clearance Form II for June graduation
- **March 21, Saturday**..............Easter recess begins after regularly scheduled classes
- **March 30, Monday**..............Class work resumes at 8:00 A.M.
- **April 3, Friday**..............Last day for notifying department heads in writing of intent to take final comprehensive examinations. Students should obtain from the department head the date on which the examination is to be given.
- **April 13, Monday**..............First day of comprehensive examinations for June graduation
- **May 18, Monday**..............Last day for notifying Graduate Office in writing of intent to drop a course or withdraw from the University without penalty for failing work
- **May 22, Friday**..............Last day for filing thesis for June graduation
- **May 29, Friday**..............Last day of comprehensive examinations for June graduation

*Registration offices remain open late enough during the first week of classes to accommodate evening students. After the first week these offices close at 5:00 P.M. Since registration for evening and Saturday classes closes with the second meeting of each class, late registrants for an evening class must complete registration before 5:00 P.M. of the day when class meets for the second time.
Graduate School Calendar, 1963-1964

Second Semester (Continued)

May 29, June 1-4, Friday-Thursday......Undergraduate examinations

June 2-4, Tuesday-Thursday...........Saturday and evening class examinations

June 6, Saturday.....................Sixty-fifth Annual Commencement, 10:00 A.M.

June 8, Monday.....................Close of second semester

Summer Session, 1964

June 15, Monday...........Registration 8:00 A.M.-3:30 P.M.

June 16, Tuesday..........Class work begins at 8:00 A.M.

June 18, Thursday...........Last day for filing petition for admission to candidacy for August graduation

June 19, Friday...........Last day for notifying department heads in writing of intent to take comprehensive examinations for August graduation

June 20, Saturday...........Last day for filing in the Registrar’s Office application for August graduation

June 26, Friday...........Last day for applying to the Graduate Office in writing for a partial refund of fees for dropping a course or withdrawing from the University

July 3, Friday...........Last day for filing in the Graduate Office clearance Form II

July 6, Monday..........First day of comprehensive examinations for August graduation

July 17, Friday...........Last day for filing thesis for August graduation

July 20, Monday...........Last day of comprehensive examination for August graduation

July 31, Friday...........Last day for notifying Graduate Office in writing of intent to drop a course or withdraw from the University without penalty for failing work

August 6, Thursday...........Commencement 4:00 P.M.

August 7, Friday...........Summer Session closes after regularly scheduled classes

August 10, Monday...........Start of 3-week session

August 28, Friday...........Close of 3-week session
The Teachers College Board

Northern Illinois University is governed by the Teachers College Board. The Board consists of eleven members: the Superintendent of Public Instruction, the Director of Finance, and nine members appointed by the Governor for a six-year term. The Executive Officer is an employee of the State Teachers College Board and is appointed by the Board for a specific term.

Appointed Members

Mr. R. A. Stipes, Jr., Chairman ............................................ Champaign
Mr. Clarence Ropp, Secretary ................................................. Normal
Mr. Carl Dunbar ................................................................. Macomb
Mr. Morton H. Hollingsworth ............................................... Joliet
Mrs. Harriet Lowden Madlener ........................................... Oregon
Mr. William E. McBride ....................................................... Chicago
Mr. Noble J. Puffer ................................................................. Northfield
Mr. William Reed ................................................................. Oak Park
Mr. Paul Stone ................................................................. Sullivan

Ex Officio Members

Mr. Ray Page, Superintendent of Public Instruction ............. Springfield
Mr. James A. Ronan, Director of Finance ............................ Springfield

Dr. Fredrick McKelvey, Executive Officer ........................ Springfield
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Offices of the Graduate School

Administrative Staff

Leslie A. Holmes, Ph.D. (Illinois) ..................................................President
Francis R. Geigle, Ed.D. (New York University). Executive Vice-President
J. R. Hainds, Ph.D. (Northwestern) ..............................................Academic Vice-President
C. Norton Coe, Ph.D. (Yale) .......................................................Dean of the Graduate School
Bernadine C. Hanby, M.S. in L.S. (Illinois) .....................................Librarian
George S. Pritchard, Ed.D. (Michigan State) ..................................Registrar
Patricia Farley McCabe ................................ Secretary to the Dean of the Graduate School

Graduate Council

Leslie A. Holmes, Ph.D. (Illinois) ..................................................President
J. R. Hainds, Ph.D. (Northwestern) ..............................................Academic Vice-President
C. Norton Coe, Ph.D. (Yale) .......................................................Dean of the Graduate School
Clarence G. Avery, Ph.D. (Illinois) ................................................Accounting
John T. Carey, Ph.D. (Ohio State) ................................................Art
Harvey A. Feyerherm, Ph.D. (Iowa State) .......................................Biological Sciences
Lyle Maxwell, Ed.D. (Colorado) ...................................................Business Education
Joe W. Vaughn, Ph.D. (Kentucky) ..................................................Chemistry
Perry P. Chang, Ph.D. (Washington) ...............................................Economics
Ruben L. Parson, Ph.D. (Clark) .....................................................Earth Sciences
William K. Ogilvie, Ed.D. (Indiana) ..............................................Education
Robert M. Rodnay, Ph.D. (Wisconsin) ...........................................English
Ralph H. Ogilvie, Ph.D. (Pennsylvania State) ...................................History
Dorothy M. Lucke, Ed.D. (Pennsylvania State) ..................................Home Economics
George W. Senteney, Ed.D. (Missouri) ...........................................Industry and Technology
Lavern A. Walther, Ed.D. (Indiana) ..............................................Library Science
Ralph S. Novak, Ph.D. (Iowa State) ................................................Management and Finance
J. Howard Nelson, Ph.D. (New York) .............................................Marketing
Herbert F. Miller, Ph.D. (Ohio State) ..............................................Mathematics
William E. Whybrew, Ph.D. (Eastman) ..........................................Music
Donald R. Hammerman, Ed.D. (Pennsylvania State) .......................Outdoor Teacher Education
William A. Healey, Pe.D. (Indiana) .............................................Physical Education for Men
Margaret M. Duncan, Ed.D. (Columbia) .........................................Physical Education for Women
Mazhar Hasan, Ph.D. (Illinois Institute of Technology) .....................Physics
Erwin J. Lotsof, Ph.D. (Ohio) .....................................................Psychology
Harold E. Smith, Ph.D. (Cornell) .................................................Sociology and Anthropology
Paul Crawford, Ph.D. (Northwestern) ..........................................Speech

Departmental representatives are elected by their departments. The President, the Academic Vice-President, and the Dean of the Graduate School, who serves as Chairman of the Council, are ex officio members.
Graduate Faculty

Harold E. Aikins, Ph.D. (Colorado) .................. Professor of History
Mohammad Akhtar, Ph.D. (Illinois) .... Assistant Professor of Psychology
Virgil W. Alexander, Ph.D. (Nebraska) .......... Professor of Education
Dean, Evening College
Jerome E. Alpiner, Ph.D. (Ohio University) . Associate Professor of Speech
Eleanor M. Anglin, Ph.D. (Cornell) ............... Professor of Education
Counselor of the University Elementary School
Jack Arends, Ed.D. (Columbia) ..................... Professor of Art
Head, Department of Art
Don W. Arnold, Ph.D. (Iowa) ........ Associate Professor of Marketing
Clarence G. Avery, Ph.D. (Illinois), C.P.A .... Associate Professor of Accounting
Head, Department of Accounting
Orville Baker, Ph.D. (Harvard) ..................... Professor of English
Head, Department of English
Edna H. Barbour, Ph.D. (Ohio State) .......... Associate Professor of Business Education
Martin H. Bartels, Ph.D. (Ohio State) .......... Professor of Education
Director of Placement
James W. Beach, Ph.D. (Iowa State College) .. Professor of Mathematics
Frank Beezhold, M. Mus. (Cosmopolitan School of Music) .... Assistant Professor of Music
Mary M. Bell, Ph.D. (Iowa) ....................... Associate Professor of Physical Education for Women
Ralph A. Belnap, Ed.D. (Wyoming) .......... Associate Professor of Education
Aharon Ben-Ami, Ph.D. (New School for Social Research) .... Assistant Professor of Sociology and Anthropology
C. Jackson Bennett, Ph.D. (Wisconsin) .......... Associate Professor of Biological Sciences
Alfred R. Binter, Ed.D. (Kansas) .......... Assistant Professor of Education
Gordon W. Bird, Ed.D. (Columbia) .......... Associate Professor of Music
Joachim Birke, Ph.D. (Hamburg) ............. Assistant Professor of Foreign Languages
Ledford J. Bischof, Ed.D. (Indiana) .......... Professor of Psychology
W. Darrel Black, Pe.D. (Indiana) .... Professor of Physical Education for Men
John A. Bornmann, Ph.D. (Indiana) .......... Assistant Professor of Chemistry
Ralph H. Bowen, Ph.D. (Columbia) .......... Professor of History
John E. Bower, Ph.D. (Michigan) .......... Professor of Chemistry
Mabel Brantley, Ed.D. (Columbia) .......... Associate Professor of Education
Charles W. Brim, Ed.D. (Illinois) .......... Assistant Professor
Bureau of University Research
Robert N. Broadus, Ph.D. (Southern California) .. Associate Professor of Library Science
Richard H. Brown, Ph.D. (Yale) ........ Associate Professor of History
Robert D. Brown, Ph.D. (Minnesota) ............ Associate Professor of Industry and Technology

Mayo J. Bryce, Ed.D. (Columbia) ...................... Professor of Art Dean, College of Fine and Applied Arts

Robert A. Bullington, Ph.D. (Northwestern) ............. Professor of Biological Sciences

Waldo W. Burchard, Ph.D. (California, Berkeley) .. Professor of Sociology Head, Department of Sociology and Anthropology

Roy O. Burke, Ed.D. (Florida State) ............ Associate Professor of Art

Richard W. Burnett, Ed.D. (Indiana) .. Assistant Professor of Education

Paul S. Burtness, Ph.D. (Chicago) ............... Professor of English

David L. Bushnell, Ph.D. (Virginia Polytechnic Institute) .. Associate Professor of Physics

Loren T. Caldwell, Ed.D. (Indiana) ............ Professor of Earth Sciences Head, Department of Earth Sciences

Charles Canon, Ed.D. (Indiana) .............. Professor of Art

Edwin L. Carey, D.B.A. (Indiana) ............. Associate Professor of Management and Finance

John T. Carey, Ph.D. (Ohio State) ................. Professor of Art

Harry G. Carlson, Ph.D. (Ohio State) ... Assistant Professor of Speech

Milton E. Carlson, Ph.D. (Wisconsin) .............. Associate Professor and Assistant Director, Bureau of University Research

Margaret L. Carroll, Ph.D. (Wisconsin) .......... Professor of Education

V. Eleanor Casebier, Ph.D. (Northwestern) ........ Associate Professor of Management and Finance

Perry P. Chang, Ph.D. (Washington) .. Assistant Professor of Economics

John G. Christiano, Ph.D. (Pittsburgh) .... Professor of Mathematics

L. Verdelle Clark, Ed.D. (Wayne State) ........ Associate Professor of Biological Sciences

Kenneth L. Cleland, Ed.D. (Tennessee) .. Associate Professor of Education

Joseph E. Clettenberg, Ph.D. (Chicago) . Associate Professor of Education Director of Extension

Silas W. Clifton, Ed.D. (Colorado State) . Associate Professor of Education Head, University Counseling Center

Lillian Cobb, Ph.D. (Paris) ............... Professor of Foreign Languages Head, Department of Foreign Languages

C. Norton Coe, Ph.D. (Yale) ................. Professor of English Dean, Graduate School

Lloyd L. Cockrell, Ed.D. (University of New Mexico) . Assistant Professor of Outdoor Teacher Education

William H. Coffield, Ph.D. (Iowa) .............. Professor of Education Head, Department of Education

John H. Collins, Ph.D. (Frankfort) .... Associate Professor of History

Paul Crawford, Ph.D. (Northwestern) .............. Professor of Speech

Shen-Yu Dai, Ph.D. (Pennsylvania) .............. Assistant Professor of Political Science

Mark E. Dean, Pe.D. (Indiana) ............. Associate Professor of Physical Education for Men
John A. Dewar, Ed.D. (Kansas) ............... Assistant Professor of Education
Frank G. Dickinson, Ph.D. (Illinois) ............... Professor of Economics
Howard R. Dill, M.Mus. (Northwestern) ... Assistant Professor of Music
P. Allan Dionisopoulos, Ph.D. (California, Los Angeles) ............... Associate Professor of Political Science
Alton S. Donnelly, Ph.D. (California) ... Assistant Professor of History
Larry A. Doty, Ph.D. (Purdue) ............... Associate Professor of Psychology
Florence E. Doyle, Ed.D. (Colorado State) ....................... Counselor University Counseling Center
Melvyn Dubofsky, Ph.D. (Rochester) ... Assistant Professor of History
Margaret M. Duncan, Ed.D. (Columbia) ............... Professor and Head, Department of Physical Education for Women
J. Hubert Dunn, Ph.D. (Illinois) ............... Associate Professor of Physical Education for Men
James R. Elliott, Ph.D. (Syracuse) ... Associate Professor of Economics Acting Head, Department of Economics
Joong Fang, Ph.D. (Mainz) ............... Assistant Professor of Mathematics
Gaylord H. Farwell, Ed.D. (Buffalo) ... Assistant Professor of Education
R. Vernon Fay, Ph.D. (Rochester) ............... Professor of Music
Harold F. Feeny, D.Sc. (Laval) ............... Professor of Physics Head, Department of Physics
Harvey A. Feyerherm, Ph.D. (Iowa State) ............... Professor of Biological Sciences
Clinton M. File, Ed.D. (New York) ............... Professor of Accounting
Stuart D. Fink, Ph.D. (Minnesota) ... Professor of Education and Director The University School
J. Robert Floyd, D.M.A. (Indiana) ............... Associate Professor of Music
Arnold B. Fox, Ph.D. (New York) ............... Professor of English
Raymond B. Fox, Ed.D. (California) ............... Professor of Education Chairman of Secondary Education
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Morris Freilich, Ph.D. (Columbia) ... Assistant Professor of Anthropology
Sherman H. Frey, Ph.D. (Iowa) ............... Assistant Professor of Education
William P. Froom, Ed.D. (Indiana) ............... Professor and Director of Regional Services
Albert L. Furbay, Ph.D. (Wayne State) ... Assistant Professor of Speech
Francis R. Geigle, Ed.D. (New York) ............... Professor and Executive Vice-President
Charles H. George, Ph.D. (Princeton) ... Professor of History
Harold G. Gilbert, Ph.D. (Ohio State) ............... Professor of Industry and Technology
Oswald Goering, Re.D. (Indiana) ............... Associate Professor of Outdoor Teacher Education
Rubin Gotesky, Ph.D. (New York) ............... Professor of Philosophy
Howard W. Gould, Ph.D. (Iowa) ............... Professor of Chemistry
Robert H. Gourley, Ed.D. (Colorado State) . . . . Associate Professor of Education, Assistant Director of Placement

Eugene B. Grant, Ed.D. (Missouri) . . . . Professor of Education

Anne Greene, Ph.D. (Wisconsin) . . . . Associate Professor of English

Gwynn A. Greene, Ed.D. (Columbia) . . . . Professor of Education Coordinator of Student Teaching

Clark Griffith, Ph.D. (Iowa) . . . . Professor of English

James H. Grosklags, Ph.D. (Wisconsin) . . . Assistant Professor of Biological Sciences

Edith H. Grotberg, Ph.D. (Northwestern) . . . Associate Professor of Psychology

Donald R. Grubb, Ed.D. (Utah) . . . . Associate Professor of Journalism

B. Ross Guest, Ph.D. (Chicago) . . . . Associate Professor of Geography

Lawrence C. Hackamack, Ph.D. (Iowa) . . . Professor of Management and Finance

Ruth Haddock, Ph.D. (Syracuse) . . . . Professor of Education

William G. Haendel, M.S. (Wisconsin) . . . Assistant Professor of Art

J. R. Hainds, Ph.D. (Northwestern) . . . Professor of English

Academic Vice-President

Donald R. Hammerman, D.Ed. (Pennsylvania State University) . . . . Associate Professor of Outdoor Teacher Education

Ernest E. Hanson, Ed.D. (Michigan State) . . . . Professor of Education

Clarence Ethel Hardgrove, Ph.D. (Ohio State) . . . Professor of Mathematics

Ann M. Hart, Ed.D. (Indiana) . . . Assistant Professor of Nursing Education

Mazhar Hasan, Ph.D. (Illinois Institute of Technology) . . . . Associate Professor of Physics

A. Oscar Haugland, D.M.A. (Rochester) . . . Associate Professor of Music

William A. Healey, Pe.D. (Indiana) . . . . Professor of Physical Education for Men

Assistant Head, Physical Education and Intramurals

Eugene W. Hellmich, Ph.D. (Columbia) . . . . Professor of Mathematics

William J. Hendrickson, Ed.D. (Columbia) . . . . Associate Professor of Marketing

Edward T. Herbert, Ph.D. (Wisconsin) . . . Assistant Professor of English

Mildred C. Hillestad, Ph.D. (Minnesota) . . . . Associate Professor of Business Education

J. Eugene Hinton, Ed.D. (Indiana) . . . . Assistant Professor of Education

University Center

Leslie A. Holmes, Ph.D. (Illinois) . . . . President

Charles E. Howell, Ph.D. (Iowa) . . . . Professor of Sociology

Director, Bureau of University Research
Max S. Huebner, Ph.D. (Peabody). Professor of Education
    Director and Head, Department of Student Teaching
J. Frances Huey, Ed.D. (New York). Professor of Education
Roger A. Hufford, Ph.D. (Southern Illinois). Assistant Professor of Speech
Marion A. Hull, Ph.D. (Northwestern). Associate Professor of Education
Robert J. Hunyard, Ed.D. (Indiana). Associate Professor of Education
    Director of Instructional Materials
Harold E. Husa, Ed.D. (Michigan State). Assistant Professor of Education
    Dean of Men
Kathryn Iliff, Ed.D. (Denver). Associate Professor of Accounting
Eckhart A. Jacobsen, Ph.D. (Connecticut). Professor of Industry and Technology
    Head, Department of Industry and Technology
E. Nelson James, Ph.D. (Iowa). Associate Professor of English
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Consultant in Educational Problems
Established in 1895 by an act of the Illinois General Assembly, the Northern Illinois State Normal School opened its doors to students in September, 1899. It offered a two-year curriculum in teacher education until July, 1921, when legislative enactment gave it the status of the Northern Illinois State Teachers College and empowered it to award the degree Bachelor of Education. By action of the Teachers College Board in 1943, the title of the degree was changed to Bachelor of Science in Education.

In January, 1951, the Teachers College Board authorized the offering of a fifth-year program leading to the degree Master of Science in Education.

On July 1, 1955, as a result of action by the State Legislature, the name of the College was changed from the Northern Illinois State Teachers College to the Northern Illinois State College. The same legislative action authorized the College to broaden its educational services by offering academic work in areas other than teacher education. Consequently, in July, 1955, the Teachers College Board granted the College permission to add curricula leading to the degrees Bachelor of Arts and Bachelor of Science.

As the result of legislation enacted by the Seventieth General Assembly, Northern Illinois State College became Northern Illinois University on July 1, 1957.

Recent action by the State Teachers College Board has authorized the offering of the degrees Master of Arts, Master of Science, and Master of Music; of a sixth-year program leading to the degree Master of Fine Arts or to the Certificate of Advanced Study; and of doctoral programs leading to the degree Doctor of Education in Business Education and Education and the degree Doctor of Philosophy in English and History.

**Accreditation**

Northern Illinois University, a member of the Association of American Colleges and the Council of Graduate Schools in the United States, is accredited in all its degree programs (bachelor through doctorate) by the North Central Association of Colleges and Secondary Schools. The University is also accredited as a baccalaureate and master's degree-granting institution by the National Commission on Accrediting and the National Council for Accreditation of Teacher Education. Women graduates are admitted to membership in the American Association of University Women.
Northern Illinois University is located in DeKalb, a city of 18,500 people. DeKalb is 60 miles west of Chicago on United States Highway Alternate 30 and State Highway 23. DeKalb is served by the Chicago and North Western Railway and the Greyhound Bus Line.

The main campus, located on the west side of DeKalb, covers over 340 acres. It consists of four contiguous units which, for convenience, are referred to as East, Central, West, and North Campus, respectively. The Kishwaukee River borders the East Campus, and adjacent to it are two small lakes. A part of the East campus is heavily wooded (the Montgomery Arboretum, named for C. E. Montgomery, former Head of the Department of Biological Sciences), and other parts are attractively landscaped with shrubbery and flower gardens.

There are entrances to the campus from Lincoln Highway, College Avenue, Lucinda Avenue, Normal Road, and Glidden Road.

Main Buildings

Instructional and Administrative Buildings

Administration Building (completed—1897) is located on the East Campus. It contains the administrative and business offices, an auditorium with seating for 925, and student lounges, as well as classrooms and offices for faculty members.

McMurry Hall (opened—1911) is located on the East Campus, slightly northeast of the Administration Building. Named for Charles Alexander McMurry, first Director of the Practice Department and Lida B. McMurry, early member of that department, it formerly housed the campus elementary school; it has been remodeled to supply classroom and office space for the College of Business.

Still Gymnasium (dedicated—1928) is located on the East Campus, east of the Administration Building. Named for Edgar B. Still, a former resident member of the Teachers College Board, this building will be used by the Department of Physical Education for Women until 1963-64, when the Department will move to its new building on the North Campus.
Industry and Technology Building (dedicated—1928) is located on the East Campus, east of the Administration Building. Also named for Mr. Still, this building contains offices; classrooms; laboratories for graphic arts, wood, metals, electricity and electronics, technical drawings, silversmithing and crafts, and Industrial Arts activities for elementary teachers; and facilities for safety and driver education. Additional laboratories being developed are materials testing, instrumentation, industrial production illustration, and power mechanics.

Science Building (dedicated—1943) is located on the East Campus, southwest of the Administration Building. It contains over one hundred rooms, auxiliary rooms, and offices, used until 1963-64 by the Departments of Physics, Earth Sciences, Home Economics, Biological Sciences, and Chemistry. Atop this building is a meteorological tower with astronomical dome and telescope, completed in 1962.

Swen Franklin Parson Library (dedicated—1952) is located on the East Campus, slightly southwest of the Administration Building. Named for Mr. Parson, former Head of the Mathematics Department, it is the main library of the University. It is being enlarged by three additions, which will increase the book capacity from the present 174,000 volumes to 500,000 and the seating from 686 to 2,000.

Northern Field House (completed—1957) is located on the northwest corner of Central Campus. It contains classrooms, offices, spacious basketball floor, an eight-lap track, and facilities for all indoor athletic activities of the University. An athletic area suitable for intramural sports and other outdoor events will be located adjacent to the Field House. Glidden Field (varsity football and outdoor track) is located on the east border of East Campus and is named for Joseph F. Glidden, from whom it was acquired.
**Reavis Classroom Building** (completed—1957) is located at the center of Central Campus. Named for William C. Reavis, a former member of the Teachers College Board, it contains classrooms and offices of the Departments of Education, English, and Speech. To the south of Reavis, **Watson Hall** (completed—1962) duplicates it. Named for Chauncy B. Watson, Jr., a former resident member of the Teachers College Board, this building contains classrooms and offices of the Departments of Foreign Languages, History, Economics, Political Science, and Sociology and Anthropology.

**The University School** (opened—1958) is located on the Central Campus, to the west of Reavis. This building houses the college-controlled campus laboratory school. The School has two divisions, the University Elementary School and the University Junior High School. The School is wholly supported and operated by the University in order to serve its own purposes in the education of teachers.

**Student Health Center and Speech Clinic** (opened—1958) is located on East Campus, to the north of the Administration Building. It houses all student health services, as well as the Speech and Hearing Clinic.

**Fine Arts Building** (opened—1959) is located on the Central Campus, to the southeast of Reavis. It provides classrooms, studios, and offices for the Departments of Art, Music, and Speech. It contains a modern theatre with seating capacity of 490; rehearsal rooms for dramatics and instrumental and choral groups; air-conditioned studios and practice cubicles; listening rooms; a ceramics wing with kilns and other equipment; and specialized libraries for the fine arts.
Home Management House (acquired—1960) is located on the northwest corner of Normal and College. It is used by the Home Economics Department as a home for the seniors who wish to satisfy the requirement of high schools which employ vocational home economics teachers: residence in a home furnished in a way that makes for wider experience in, or greater appreciation of, the many phases of successful homemaking.

Women's Physical Education Building (to be completed for 1963-64) is located on North Campus on Garden Road adjacent to the women's athletic field, tennis courts, and golf course. It offers such modern facilities designed for the women's physical education program as gymnasiums, dance studios, activity rooms, swimming pool, shower and locker rooms, equipment rooms, classrooms, seminar rooms, reference library, and offices.

Michael Faraday Hall (to be completed for 1963-64) is located on East Campus southeast of the Science Building. It contains the offices, classrooms, and laboratories of the Chemistry and Physics Departments.

Practical Arts Building (to be completed during 1963-64) is located on East campus, north of McMurry Hall, to which it is connected by corridors. It will contain classrooms, laboratories, and offices for the Home Economics Department and the College of Business.
Graham Hall (to be completed during 1963-64) is located on Central Campus, west of the University School, to which it is joined by a covered walkway. Named for Ray Graham, former State Director of Exceptional Children, it will accommodate a maximum of seventy-five handicapped children who will aid in the instruction of Special Education Teachers. It will also house the Reading Clinic and contain classrooms and offices of the Education Department.

**Housing and Food Facilities**

**Williston Hall** (dedicated—1915) is located on East Campus, to the north, west of the Administration Building. Named for John Williston Cook, first President of Northern, it houses 233 women students.

**Adams Hall** (completed—1949) is located on East Campus, to the north of Williston. Named for Karl L. Adams, fourth President of Northern, it houses 190 women students.

**Gilbert Hall** (opened—1952) is located on East Campus, to the northwest of McMurry Hall. Named for Newell D. Gilbert, one of the first members of the faculty at Northern and coordinator of student teaching in the city schools, it houses 486 men.
Neptune Residence Hall Complex is located at the northeast corner of Central Campus. Named for Celine Neptune, a former Head of Department of Home Economics, it consists of four units: Neptune North Residence Hall (dedicated—1955), Neptune West Residence Hall (opened—1959), Neptune East Residence Hall (opened—1960), and Neptune Central Dining Hall (opened—1960). In 1962-63 it housed fifteen hundred women students.

University Apartments (dedicated—1960) is located on the West Campus, to the north of Abraham Lincoln Residence Hall. It comprises forty modern efficiency apartments and forty one-bedroom apartments, all completely furnished, for married students.

Abraham Lincoln Residence Hall (completed—1962) is located on the West Campus, across Glidden Road from the Northern Field House. The four wings, with a total capacity of one thousand men students (1962-63), ties into one large central recreational and food service center. Stephen A. Douglas Residence Hall (to be completed for 1963-64) is located on the West Campus, southwest of Lincoln, which it will duplicate.

The University Center (completed—1962), located on a tract of land between Normal Road and Carroll Avenue, was constructed from funds supplied by students, alumni, and friends of the University. It contains a book store; cafeteria for 450; snack bar for 450; twelve bowling alleys; browsing room; formal dining room for 150; grand ballroom for lectures and concerts (1,660), banquets (1,129), and dances (1,750 couples); large lounge; multiple-purpose rooms; offices; crafts room; meeting rooms; and twenty bedrooms for overnight guests of the University.
Lorado Taft Field Campus

The Lorado Taft Field Campus, covering 66 acres, is located approximately 35 miles west of DeKalb near the city of Oregon. This branch campus, adjacent to the Lowden Memorial State Park, is situated in a hilly and heavily wooded area on the east side of the Rock River, which was formerly the site of an art colony. The buildings in this scenic area have been completely rehabilitated and are now equipped for year-round use. The area is ideal for practical natural laboratory work. Here students have an opportunity to study various aspects of outdoor educational activities not available in the traditional classroom.

The Taft Campus is used during the regular school year for direct experiences in outdoor education for all elementary education majors and other school groups. It is also made available to public school systems which wish to give their students and teachers an opportunity to use the out-of-doors in the educational program of children. Student teachers work with the elementary school groups on a 24 hour a day basis while they are living at the field campus.

Graduate and undergraduate courses offered at the Lorado Taft Field Campus confer residence credit.

Overlooking the river is spacious Poley Hall, which houses the Field Campus library.

Taft House, the former home of the famous sculptor Lorado Taft, has a comfortable lounge room, a library, and office. These rooms can be used for conference purposes.

The Browne House has been converted into a comfortable and well-equipped bunk house for 16 persons. The Dickerson House has been completely rebuilt and equipped to house 22 persons. Grover House, a multipurpose building, contains a large classroom and science laboratory and sleeps 30. A new bunk house, capable of housing about 80 additional persons has been completed. A new dining hall with kitchen facility is now under construction just west of Poley Hall. The dining room, on a bluff overlooking the Rock River, will have walls of glass on three sides to take advantage of the view. The building will also be used for recreation.
University Libraries

The Northern Illinois University Libraries include the Swen Franklin Parson Library, the branch library at the Lorado Taft Field Campus, a Library annex in Neptune North housing the reserve book collection, and a library in the University School serving both the elementary and the junior high schools there.

The Swen Franklin Parson Library, the main library, is located directly north of the Science Building and west of the Administration Building. It was opened in 1952 and has two main service floors and a partial third floor. The building is well-lighted, fireproof, and air-conditioned throughout. At present the library is being enlarged by two additions, and a third addition has been authorized and is in the planning stage. When they are completed, the book capacity will be increased from the present total of 174,000 volumes to 500,000; and the seating will be increased from 686 to 2,000.

In the present building there are two large reading rooms, a browsing room, bibliography room, two small typing rooms, a Recordak room, an Educational Materials Center, the Fouser Music Room with record players and a choice selection of records, an auditorium, and the Library Science Department. The first addition under construction contains two large reading rooms, one of which will house the Educational Materials Center and the juvenile book collection, which will be adjacent to new quarters for the Library Science Department. The other reading room will be a Periodicals Room. The catalog department will be located in this addition along with other offices, typing, microfilm, conference, and work rooms.

The second addition, also under construction, adds four tiers to the present four-level book stacks, as well as 24 study carrels to the existing 36 carrels.

The third library addition is being planned so as to add still another pair of large reading rooms and four tiers of stacks, 124 carrels, a classroom for instruction in library usage, and miscellaneous smaller areas for library purposes.

A branch library will be established for physics and chemistry in the new science building now under construction.

Approximately 174,000 volumes, 14,000 pamphlets, 1,679 periodical titles, and 20 newspapers are available for use. While the direct needs of the various departments are given first consideration, recreational reading has not been neglected.

Educational Bulletin Service

The Educational Bulletin Service publishes bulletins designed to provide practical helps for classroom teachers. A list of bulletin titles may be obtained from the University Center Book Store. Bulletins may be purchased from the University Center Book Store. For further information, write the Chairman, Educational Bulletin Service Committee, R. E. Schreiber.
Museums

Museum of Biology

The Natural History Museum is located on the third floor of the Science Building. Collections include invertebrates, vertebrates, and plants. Specimens maintained by the museum are for classroom and research use.

The herbarium contains a representative collection of Northern Illinois plants. The Barker Collection of fossils and minerals is a permanent possession of the University. Limited collections of other Illinois vertebrates (fish, reptiles, mammals, etc.) are available. The Ellwood insect and mollusk collection is also maintained. The bird section includes a teaching and research collection of more than 2,000 study skins of North American birds. Many mounted specimens are included. Illinois species of birds are well represented.

Sanford Tyler Chesebro Collection

The Sanford Tyler Chesebro Collection of Indian arrowheads, presented to the University in 1951, is a significant aid in teaching some aspects of the early Indian culture of Illinois. This fine collection is used both in the classroom and for public exhibition. The collection is kept at Lorado Taft Field Campus and in the Department of Earth Sciences.
The Graduate School

History

Under authority granted by the Illinois State Teachers College Board, Northern Illinois University has offered work leading to the degree Master of Science in Education since 1951. More recently the following additional degrees at the fifth-year level were authorized: Master of Arts (in Art, Economics, English, History, Library Science, Political Science, Psychology, Sociology and Anthropology, and Speech); Master of Science (in Biological Sciences, Business Administration, Chemistry, Earth Sciences, Home Economics, Industry and Technology, Mathematics, and Physics); and Master of Music. In 1958 a sixth-year program leading to the Certificate of Advanced Study or the degree Master of Fine Arts was authorized; and in 1961, the Teachers College Board approved programs leading to the degree Doctor of Education in Business Education and Education and to the degree Doctor of Philosophy in English and History.

During the academic year 1963-64 graduate study will be offered in the following subjects: Accounting, Art, Biological Sciences, Economics, Education, English, Foreign Languages, History, Home Economics, Industry and Technology, Journalism, Library Science, Management and Finance, Marketing, Mathematics, Music, Outdoor Teacher Education, Philosophy, Physical Education for Men, Physical Education for Women, Physics, Political Science, Psychology, Social Sciences, Sociology and Anthropology, Special Education, and Speech. Full majors leading to advanced degrees are offered in all these fields except Foreign Languages, Journalism, Philosophy, and Special Education. Students wishing to study one of these four subjects should major in a related field. As described on page 32, area majors which cut across departmental lines are offered by certain groups of departments.

Purpose

The University seeks to create an environment that will foster attitudes of self-reliance and self-discipline conducive to professional excellence and intellectual maturity.

The University makes available to the graduate student a body of knowledge of his own and related disciplines; it provides the student with opportunities to acquire and apply techniques which will aid him in his pursuit of knowledge; and it encourages the student and the faculty to engage in research for the purpose of discovering truths and establishing previously unknown relationships.
Graduate Programs Offered

Master of Science in Education

The student may select a program leading to this degree in any of the following departments:

- Art
- Biological Sciences
- Business Education
- Chemistry
- Earth Sciences
- Education
- English
- History
- Home Economics
- Industry and Technology
- Mathematics
- Outdoor Teacher
- Education
- Physical Education for Men
- Physical Education for Women
- Physics
- Social Sciences
- Speech

Area Majors

Area majors leading to the degree Master of Science in Education involve work in two (or occasionally more than two) departments. Usually a student divides his work about equally between two departments. Information about area majors may be obtained from the heads of the departments concerned.

Area majors are offered in the following combinations:

- Biological Sciences—Chemistry—Earth Sciences—Physics
- Biological Sciences and any one of the following subjects:
  - Chemistry
  - Earth Sciences
  - Physics
  - Psychology
- Earth Sciences—Chemistry
- Earth Sciences—Physics
- Education and any one of the following subjects:
  - Art
  - Biological Sciences
  - Business Education
  - Chemistry
  - Earth Sciences
  - Economics
  - English
  - History
  - Home Economics
  - Industry and Technology
  - Library Science
  - Mathematics
  - Music
  - Philosophy
  - Physical Education
  - Physics
  - Political Science
  - School Business Management
  - Sociology and Anthropology
  - Special Education
  - Speech
- English and any one of the following subjects:
  - Economics
  - Foreign Languages
  - History
  - Journalism
  - Philosophy
  - Political Science
  - Sociology and Anthropology
- History—Journalism
- History—Economics—Political Science—Sociology and Anthropology
- Journalism—Economics—Political Science—Sociology and Anthropology
- Mathematics—and any one of the following subjects:
  - Biological Sciences
  - Chemistry
  - Earth Sciences
  - Physics

Master of Arts

The student may select a program leading to this degree in any of the following departments:

- Art
- Economics
- English
- History
- Library Science
- Political Science
- Psychology
- Sociology and Anthropology
- Speech
Master of Science

The student may select a program leading to this degree in any of the following departments:

- Biological Sciences
- Earth Sciences
- Industry and Technology

- Business Administration*
- Home Economics
- Mathematics

- Chemistry
- Physics

Master of Music

A program leading to this degree is offered by the Department of Music.

Master of Fine Arts

A program on the sixth-year level leading to this degree is offered by the Department of Art.

Certificate of Advanced Study

The student may pursue a sixth-year program leading to the Certificate of Advanced Study in any of the following departments:

- Biological Sciences
- English
- Physical Education for Women
- History

- Business Administration*
- Industry and Technology
- Physics
- History
- Mathematics
- Political Science
- Business Education
- Music
- Sociology
- Chemistry
- Physical Education for Men
- Speech
- Earth Sciences
- Education

Doctor of Education

Education

Doctor of Philosophy

English

History

*In 1961 the Department of Business Administration was divided into three departments: Accounting, Management and Finance, and Marketing. Courses leading to the degree Master of Science and Certificate of Advanced Study in Business Administration are offered by these three departments.
Admission and Registration

Admission Requirements

I. For Unclassified Students

A student must hold a baccalaureate degree in order to be admitted as unclassified. An unclassified student may register for any courses which he is qualified to carry. Such courses may or may not be recognized in computing credit required for a degree or certificate if a student transfers from unclassified to classified status, as he may upon the recommendation of the department in which he plans to major and with the approval of the Graduate Admission Committee. An unclassified student need not have a departmental adviser or advisory committee.

II. For Classified Students

A student must have at least a 2.5 average in the last two years of undergraduate work at an accredited institution and approval of the department in which he plans to major to be admitted as a classified student.

For admission to programs beyond a master's degree, a student must have at least a 3.2 average in graduate work and approval of the department in which he plans to major; provided, that students undertaking doctoral work must have at least a 3.5 average in graduate work at the end of their sixth year of graduate work (30 semester hours beyond the master's), or before being admitted to candidacy for the doctorate, whichever comes earlier.

All entering students enrolled for 7 semester hours or more must have a physical examination. This should be given by the family physician and is to be reported on a health chart furnished by the University. A smallpox vaccination at the time of examination is required unless a certificate of successful vaccination during the last three years can be furnished. A tuberculin test or a chest x-ray done during the past year is also required, and the report of it should be attached to the medical record. If the tuberculin test is positive, it should be followed by a chest x-ray. The report of the physical examination should be returned to the Student Health Service at least one week preceding the beginning of the semester in which the student plans to enroll. Registration is not complete until the complete health chart is on file at the Student Health Service.

Application for Admission

Students who wish to register for graduate study should write to the Dean of the Graduate School, requesting a copy of the form "Application for Admission to the Graduate School." This form should be completed and returned to the Dean of the Graduate School no later than two weeks before registration.

A student who holds a baccalaureate degree from a college or university other than Northern Illinois University or who has pursued graduate study elsewhere should request the institutions which he has attended to send three copies of his transcripts to the Dean of the Graduate School.
Graduate Record Examinations

All graduate students seeking advanced degrees or certificates are required to have on file in the Graduate School Office their scores on the Aptitude Test of the Graduate Records Examination. This test will be given on campus several times each year on dates to be announced.

Admission to Teacher Education

Classified and unclassified graduate students who wish to be certified for public school assignments must make application for admission to teacher education by securing an application form from the Dean of the Graduate School. Admission to teacher education is a selective process since the institution must recommend for certification those who prepare for teaching.

To be admitted to teacher education the student

1. Must have a major and minor in subject matter areas for which student teaching assignments and teaching positions exist.

2. Must not have been rejected for teacher preparation previously by this institution or any other institution.

3. Must be of sufficiently high academic ability (> 2.5 undergraduate record, > 3.0 graduate record) and possess personal qualifications to a degree that will contribute to success in the profession.

The degree M.S.Ed. is conferred only on students who meet Illinois certification requirements and who have the approval of this institution.

Students seeking the M.S.Ed. in Education as a Field of Study are not required to make application for admission to teacher education as described, since they will meet certification requirements as part of their degree program.

Registration

Graduate students are expected to register during the regular registration period at the beginning of each semester (see calendar). Those who register after the specified date are required to pay a "late registration fee" of $3.00.

Arrangements for registration and for assignment to an adviser are made through the Office of the Dean of the Graduate School.

Maximum Loads for Graduate Students

Graduate students may not enroll for more than 17 semester hours during a semester. Graduate students holding assistantships are limited to 9 semester hours if their assistantship requires twenty to twenty-four hours of work a week for the department; they are limited to 12 semester hours if their assistantship requires ten to twelve hours work a week for the department. Graduate students who are fully employed are not permitted to enroll for more than 6 semester hours during a semester. Summer school students may not enroll for more than 9 semester hours in an eight-week session or for more than 12 semester hours in an eleven-week session.
Auditors

Any full-time graduate student may be permitted to audit, without added fees, one or more additional courses, either undergraduate or graduate, provided approval is first obtained from the student's adviser, the instructor of the course, and the Dean of the Graduate School. A student who enrolls as an auditor in a course may not take the examinations in the course and will not receive credit.

Part-time students may be permitted to audit additional courses on the same basis as regular students upon the payment of an added fee of $9.00 per semester hour, with the provision that the total amount of fees paid will not exceed $116.25 per semester for residents of Illinois.

Grading System

Grades and their honor point values are as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Honor Points per semester hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>0</td>
</tr>
<tr>
<td>I (Incomplete)</td>
<td></td>
</tr>
<tr>
<td>W (Passing at time of withdrawal from the University or from a course)</td>
<td></td>
</tr>
<tr>
<td>S (Satisfactory)</td>
<td></td>
</tr>
<tr>
<td>U (Non-satisfactory)</td>
<td></td>
</tr>
<tr>
<td>O (Auditor, no grade and no credit)</td>
<td></td>
</tr>
</tbody>
</table>

Students are not permitted to repeat for credit any courses in which they have already received a passing grade ("C" or better). A course in which a failing grade ("D" or "F") has been received may be repeated once. If a course is repeated, both grades are computed in the honor point average.

An incomplete may stand for two calendar years from the close of the semester in which it is given, and the student may petition the Dean of the Graduate School for extension prior to the end of the two year period. If no petition is presented or if the petition is denied, the incomplete becomes an "F" at the end of the two year period.

A graduate student who wishes to drop a course or withdraw from the University must write a letter of notification to the Dean of the Graduate School at least three weeks prior to the end of the semester or at least one week prior to the end of a summer session. For all courses in which a student is doing passing work ("C" or better) at the time of drop or withdrawal, he will receive "W." For any course in which a student is not doing passing work, he will receive "F." A student who fails to notify the Dean of the Graduate School in writing of his intent to drop a course or to withdraw from the University, or a student who drops a course or who withdraws from the University after the deadline has expired, will receive "F." (See the Graduate School Calendar, pp. 2-5, for the dates by
which notification of intent to drop a course or to withdraw from the University must reach the Graduate Office.)

A student who receives 12 semester hours of graduate credit grades below "B" will be disqualified as a candidate for a degree in the Graduate School.

A student who receives 6 semester hours of graduate credit grades of "D" or "F" will be dropped from the Graduate School.

The grade average of all graduate students is computed on a cumulative basis, including the record of all graduate work which has been transferred to Northern Illinois University. The honor point average at any time is the quotient obtained by dividing the total number of honor points by the total number of properly weighted credit courses which the student has taken up to that time.

In general, graduate classes meet on the basis of one hour of credit for each class hour. Certain classes, however, are of such nature that they require more than one hour of attendance for each hour of credit; and some courses confer more than one hour of credit for each hour in class. Particular information regarding a specific course may be obtained from the instructor or from the Office of the Dean of the Graduate School.
Expenses and Financial Aids

The average total expenses for room, board, books, and supplies is approximately $1,200 to $1,300 for the academic year. The fees for graduate students are as follows:

Fees

Full-time Students (per semester)
*Registration fee, Illinois residents .................................................... $116.25
*Registration fee, non-residents of Illinois ........................................ 201.25

Part-time Students (six semester hours or less)
Minimum fee .......................................................... 18.00
Per semester hour for residents of Illinois ....................................... 9.00
Per semester hour for non-residents of Illinois .................................. 23.00
(Minimum fee for non-residents) .................................................... 46.00

Extension Students
Minimum fee .......................................................... 18.00
Per semester hour for residents of Illinois ....................................... 9.00
Per semester hour for non-residents of Illinois .................................. 23.00
(Minimum fee for non-residents) .................................................... 46.00

Special Fees
Graduation fee (payable at time of graduation only) .................. 15.00
Late registration fee charged after scheduled registration day ........ 3.00
For each change of program after preregistration ...................... 1.00
Duplicate transcript of record (after the first is issued) ............ 1.00
Duplicate identification card (after the first is issued) ............ 1.50
**Examination fee ......................................................... 5.00

A veteran who entered service as a resident of the State of Illinois and who no longer has educational entitlement under a federal bill or who does not wish to use the GI bill may receive assistance under the Veterans State Scholarship. For full-time students this amounts to $78.00; for the part-time student (6 semester hours or less) it will pay the entire registration fee.

Transcripts are not issued to persons who are under financial obligation to the University or the University Loan Fund.

Fees are due at the time of registration. No refunds on fees are granted after nine calendar days following the regular registration day.

*The hospital-medical-surgical fee of $8.25 included in these figures is payable at the time of registration by all full-time graduate students except those whose schedule includes only evening or Saturday classes. This fee will be refunded to any student who can submit satisfactory proof that he already has comparable insurance coverage.

**All graduate students who are working for an advanced degree or certificate are required to take the aptitude test of the Graduate Record Examinations.
Changes in class programs will be permitted only with the approval of the student's adviser, and a charge of $1.00 will be made for each program change after the third day of the semester.

Students registering for a laboratory course in chemistry are required to purchase a $5.00 "breakage coupon" at the Business Office. Refunds will be made on unused portions of the coupon.

The incidental and activities fees cover the following services and privileges: registration; library; health service; gymnasium; admission to athletic events, concerts, dramatic productions, lectures, speech events; and subscription to the weekly University newspaper and the University annual.

Veterans Affairs Office

The Veterans Affairs Office, which operates in conjunction with the Office of the Dean of Men, serves as a liaison between student veterans and governmental agencies concerned with educational benefits for veterans. Assistance is given to both undergraduate and graduate students in making necessary reports to the Veterans Administration and in obtaining educational benefits under the various public laws providing for the education and training of veterans. Inquiries concerning educational benefits for veterans should be directed to the Coordinator of Veterans Affairs.

Loans

The National Defense Student Loan Program

Northern Illinois University is participating in the Student Loan Program of the National Defense Act of 1958. College students or prospective college students who are in need of financial assistance to continue or commence their college education may be able to borrow up to $1,000 a year through this loan program.

The law requires that each borrower be a full-time undergraduate or graduate student, that he be in need of the amount of his loan to pursue his course of study, and that he be, in the opinion of the University, capable of maintaining good standing in his chosen course of study. It is further provided in the law that special consideration in the selection of loan recipients be given to (a) students with a superior academic background who express a desire to teach in elementary or secondary schools and (b) students whose academic background indicates a superior capacity or preparation in science, mathematics, engineering, or a modern foreign language.

The borrower must sign a note for the loan. Repayment of the loan begins one year after the borrower ceases to be a full-time student, with payment being completed within ten years. No interest on the student loan may accrue prior to the beginning of the repayment period, and interest thereafter is to be paid at the rate of three percent a year.

The National Defense Education Act contains a provision that up to fifty percent of a loan (plus interest) may be canceled in the event a borrower becomes a full-time teacher in a public elementary or secondary school. Such cancellation is to be at the rate of ten percent a year up to five years.

Applications for the National Defense Student Loan may be secured by writing to or calling at the Office of the Coordinator of Student Financial Aids.
Other Loan Funds

Northern Illinois University Foundation. The Foundation administers five funds from which deserving students may borrow, at a low rate of interest, on personal notes: The Student Loan Fund, the Bertha Bennett Sawyer Loan Fund, the Lewis V. Morgan Loan Fund, the Emil A. Anderson Loan Fund, and the Janet Lynn Mary Rams Loan Fund. Loans are not made to entering students. Applications may be obtained in the Office of the Coordinator of Student Financial Aids.

Northern Illinois Men's Loan Fund. A loan fund is available to male students in good standing who have earned a cumulative grade average of at least "B" at Northern Illinois University. Small emergency loans may be obtained from this fund in amounts up to approximately $100. All loans are repayable during the semester in which they are secured. Applications and further information may be secured from the Coordinator of Student Financial Aids.

John S. Clark Memorial Loan Fund. The elementary teachers of Waukegan, Illinois, have presented to the University a sum of money to be used as a loan fund for students facing emergency situations. The fund serves as a memorial to the late John S. Clark, who served as Superintendent of the Waukegan Elementary Schools for many years. Information concerning the procurement of a loan from this source may be secured from the Coordinator of Student Financial Aids.

Associated Women Students Loan Fund. This organization, to which all undergraduate women belong, has funds available for short term loan (not exceeding $100) to any graduate woman student maintaining at least a "B" average at Northern Illinois University. Applications may be obtained in the Office of the Coordinator of Student Financial Aids.

Assistantships

Two types of graduate assistantships are offered. For students in the fifth-year program assistantships provide a maximum stipend of $180 per month for the academic year of nine months. For students with a master's degree enrolled in sixth-year or doctoral programs, they provide a maximum of $240 per month for the academic year.

Assistants are selected for their ability and are appointed on a part-time basis with the understanding that their academic load may not exceed 9 hours each semester if they receive the maximum stipend.

Application forms for graduate assistantships may be procured from the Office of the Dean of the Graduate School.
Student Housing

University Residence Halls

The Office of the Director of Housing lists rooms that are for rent in private homes but does not make reservations for students. The cost of these rooms varies but averages approximately $150-$160 per semester.

Accommodations for approximately 3,400 students are provided on campus in seven residence halls. These halls provide comfortably-furnished rooms, study facilities, and recreational, reception, and lounge areas, as well as telephone and mail services. Currently, the residence halls provide housing for 1,500 men and 1,900 women, and additional residence halls are being planned for increasing student enrollments. The residence halls program, under the guidance of full-time staff members and upper-class student counselors, is designed to provide opportunities for academic and social development of the residents.

Because of unsettled conditions in prices of food and labor, the University reserves the right to adjust charges for room and board during the University year. If an adjustment is necessary, an announcement to that effect will be made well in advance of the beginning of the semester during which it will become effective.

Students who plan to live in the residence halls should make room reservations as early as possible before the opening of the academic year. In order to apply for a room in the residence halls, the student must have at least tentative acceptance of admission from the Dean of the Graduate School, and his academic standing must be checked for conformance to the campus housing assignment regulations. There is no need for eligible students to write concerning an application for housing unless they have not heard from the Housing Office within a reasonable length of time after receiving the notice of acceptance from the Graduate Office.

All application cards must be accompanied by the required $25.00 room deposit which also serves as a breakage and damage fee during the year's residence, and all contracts are made for the full academic year.

In regard to housing on campus in the residence halls, applications from undergraduate students are given preference over those from graduate students.

Meals are served on campus at the University Center.

The University Apartments

The University has eighty units of modern permanent-type two-story apartments for married students. These units are completely furnished, and rentals cover all utilities including electric heat but not telephones. Rentals are $67.50 per month for the efficiency apartments and $77.50 for the one-bedroom apartments. There are forty units of each type. Applications and further information may be obtained from the Office of the Director of Housing.
Services and Facilities

Health Service

The Student Health Service, under the supervision of a physician, has headquarters in the Health Center and Speech Clinic on Lucinda Avenue. It is open during class hours. Students have the privilege of visiting the clinic for consultation, advice, and treatment and also for discussing health problems.

University Counseling Center

The University Counseling Center, located in Barracks 16, has been established as a regular part of the University's program. The major function of the University Counseling Center is to help graduate and undergraduate students in selecting educational and vocational objectives and in meeting problems of personal adjustment. A staff of counselors is available to discuss with students problems of an educational, vocational, or personal nature. Through the use of measuring devices and counseling sessions, students may receive assistance in determining their strengths and limitations, assessing their interests, identifying their problems, and in planning a systematic program of social and personal development. A library of materials on occupations is available in the Counseling Center for students who wish to inform themselves with respect to vocational opportunities.

Student Teaching

Since student teaching is required for certification in Illinois, facilities for student teaching will be made available to graduate students who have been admitted to the teacher education program under the conditions described above on page 35.

Internship for Graduate Students

Field work under University supervision may be utilized to develop the required proficiencies and may be substituted for regular course work. Only those who have had student teaching or experience in schools are eligible for internship credit. For further information see the course description under Education 595 and inquire at the Student Teaching Office.

Speech Rehabilitation Center

During the summer session, Northern Illinois University, in cooperation with the University of Illinois, Division of Services for Crippled Children, offers a six-week residential program for organically handicapped children with associated speech problems. Undergraduate and graduate credit can be earned by participating in this instructional program. Speech correction majors may earn 1 to 3 semester hours in clinical practice, Speech 427 and 428. In addition, student teachers in elementary education may be assigned to conduct individual and group classes in reading, spelling, handwriting.
arithmetic, social studies, creative dramatics, music, art, and physical education. There is also a limited number of staff positions available to qualified individuals.

Placement Bureau

The University maintains a Placement Bureau to aid students in securing positions. Systematically organized records and credentials are available for reference to superintendents, principals, and other prospective employers. The credentials are submitted to these officials as confidential information and supply the following data: 1. Academic record and scholastic standing; 2. Student teaching record; 3. Inventory of special interests and abilities; 4. Record of University activities; 5. Actual teaching or other experience; 6. Personal evaluation by instructors, critic teachers, and former employers. When the number of candidates seeking positions exceeds the number of requests for employment interviews, it is the policy of the Placement Bureau to consider the above factors in bringing the merits of candidates to the attention of employers.

The services of the Placement Bureau are available to all current graduates, and the bureau also promotes the candidacy of alumni who have had several years of successful employment experience. The Northern Illinois University Placement Bureau offers free service to all graduates, to all school administrators, and to personnel representatives in business and industry.

Recreational Facilities

The University sponsors an extensive intramural athletic program each semester. Regular tournaments are held in tennis, handball, playground ball, volleyball, basketball, wrestling, boxing, and golf.

Part of a fifty acre area has been improved for intramural recreation, physical education classes, and athletic practice. There are tennis, handball, speedball, and volleyball courts; baseball and softball diamonds; football fields; athletic practice fields; hockey, soccer, and touch football fields; and a golf driving range. The area provides an opportunity for men and women to participate in various sports under excellent conditions.

Picnic areas are readily accessible in the Annie Glidden Woods adjacent to the campus and in Hopkins Park north of the city. The municipal swimming pool is also available to students.

In general, graduate students are invited to participate in undergraduate activities, including band, orchestra, and chorus, which do not involve intercollegiate competition. Information regarding specific organizations may be obtained at the Office of the Dean of the Graduate School.

Student Operation of Motor Vehicles

Student-owned or student-operated motor vehicles must be registered with the University if the student is registered for one or more day courses. All vehicles must be registered with the Office of the University Police by the first regular day of classes or within five days after the vehicle is acquired. Information on the license number and ownership of the vehicle, driver's license of the applicant, and proof of liability insurance must be available at the time of registering the vehicle.
Parking space on the campus is limited; therefore, it is controlled. Parking space during the hours of 7 a.m. to 5 p.m. on Monday through Friday is available only to those students eligible to purchase parking decals.

Students eligible to purchase parking decals are those:

(1) who reside in University housing,

(2) who live beyond a designated geographical area as described in the published Motor Vehicle Regulations,

(3) who have physical disabilities,

(4) who have other extremely unusual circumstances which make a motor vehicle a campus necessity.

Students cannot, therefore, plan to use their motor vehicles to get to, from, or between classes.

The published regulations on the operation and registration of motor vehicles are available to all students. Each student is held responsible for registration and parking and traffic regulations in accordance with the Motor Vehicle Regulations of the University.
Requirements for Graduate Degrees

Requirements for Fifth-Year Programs

The following regulations apply to candidates for the degrees Master of Science in Education, Master of Arts, Master of Science, and Master of Music.

For more detailed requirements for specific degrees, the student should consult the statement appearing immediately above the course descriptions of his major department.

Candidacy

Admission to the Graduate School does not necessarily imply admission to candidacy for a master's degree. Upon the completion of 8 semester hours of graduate work at Northern Illinois University, and not later than the first month of his final semester, a student shall file application in the Office of the Dean of the Graduate School for admission to candidacy.

A student will not be admitted to candidacy for a degree until he is following a program approved by his adviser or advisory committee.

Deficiencies

A graduate of an approved college or university is presumed to be eligible for advanced work in any department if he presents a major in the area of work of that department. Any specific courses or their equivalents which are prerequisites to advanced courses shall be looked upon as deficiencies, to be made up before the student takes such advanced courses.

Students who elect the sequence in education for elementary school teachers will be expected to regard as deficiencies those courses necessary for certification as an elementary school teacher in the State of Illinois.

Credit Requirement

A candidate for a master's degree must earn a minimum of 32 semester hours of graduate credit and a minimum grade average of "B." (This average must be earned in the major field as well as in the total program. Area majors must earn a "B" average in each of the fields comprising the major.) The minimum required number of semester hours in residence is 22. Graduate credit is given only in those courses in which a grade of "C" or better is earned.

Normally, a candidate for the degree Master of Science in Education is expected to earn not less than 10 semester hours in courses outside his major field. In exceptional cases, this requirement may be waived by the Dean of the Graduate School. In order for an exception to be considered, the candidate, with the consent of his adviser or advisory committee, must submit a written petition to the Dean of the Graduate School, stating clearly his reasons for desiring waiver.

The requirement of 10 semester hours outside the major field is not applicable to candidates for other master's degrees.

The degree Master of Science in Education is conferred only on students following a program of courses which will satisfy Illinois Certification requirements.
Credits Transferable

Subject to the approval of the Dean of the Graduate School, a student will be allowed to transfer a maximum of 6 semester hours of graduate credit from another institution, none of which shall be in extension or correspondence work.* To receive consideration of work done elsewhere, the student must file a petition with the Dean and request the registrar of the other institution to send a transcript of his work to the Office of the Graduate School.

Credit for Extension Work

With the approval of the major department, a student will be permitted to offer for credit a maximum of 8 semester hours in extension work taken from this institution.* A list of centers approved for graduate extension work may be secured from the Dean of the Graduate School.

Courses for Which Credit Is Allowed

Only courses which are numbered 400-499, 500-599, and 600-699 and which are taught by members of the graduate faculty carry credit toward the master's degree. Not more than fifty percent of the credit counted toward a master's degree may be earned in courses numbered 400-499.

Some courses numbered in the 400's carry only undergraduate credit. Graduate students enrolled in 400-level courses are responsible for ascertaining whether these courses have been approved for graduate credit and whether they are taught by members of the graduate faculty. Only those courses listed in this catalog or its supplements carry graduate credit.

Completion of Graduate Work

All work for the master's degree, including work transferred from other institutions, must be completed within a period of six years unless exception is granted by the Graduate Council.

Advisory System

Each student is assigned, by the head of his major department, to an adviser or advisory committee whose purpose is to guide his selection of courses and to recommend him, when properly qualified, for the degree. The adviser or advisory committee is selected by the head of the department in which the student is majoring.

The program of studies should be formulated by the student in conference with his adviser or advisory committee during the first semester of graduate work. Proper forms may be obtained from the Office of the Dean of the Graduate School and must be completed before a student is admitted to candidacy. (See p. 45)

Qualifying Paper

Before taking the final comprehensive examination, a candidate must submit a qualifying paper or thesis, which is to be a research study written in the candidate's major field. Its subject must be approved by

*Students who wish credit by transfer and also wish to take courses in extension should keep in mind the requirement that a minimum of 22 semester hours credit must be earned in residence.
the chairman of the student's advisory committee or by his adviser, and when completed it must be approved by the professor under whom it was written and the adviser. If the supervisor is also the adviser, a second reader must be appointed by the head of the major department. The paper must follow the recognized standard forms of footnoting and bibliography. The original paper and two carbon copies, together with a one-page abstract, must be submitted in a standard folder to the Office of the Dean of the Graduate School. A statement showing approval by the staff members involved must be filed in the Office of the Dean of the Graduate School at least one week before the candidate appears for examination.

Examinations

Final written comprehensive examinations are required of all candidates for the master's degree at some time within the latter half of the semester which marks completion of work for the degree, but in any case at least one week before such completion. In some departments an oral examination is required as well. These examinations are given by the department or departments in which the major is taken. Students eligible for an examination must file with their major adviser a notice of their intent to present themselves for it.

Departments concerned will post notices of the date and place for each examination at least two weeks before it is to be administered.

All students must meet the requirements of Senate Bill Number 195 of the 68th General Assembly of the State of Illinois. In brief, this law requires satisfactory completion of an examination on the Constitution of the United States, the Constitution of the State of Illinois, and the proper use and display of the American flag. Students who have not satisfied the requirement at the undergraduate level must satisfy it at the graduate level.

Requirements for Sixth-Year Programs

Master of Fine Arts and Certificate of Advanced Study

The purpose of the sixth-year programs leading to the Certificate of Advanced Study and the degree Master of Fine Arts is, in the main, to encourage and enable school administrators, supervisors, and classroom teachers (elementary, secondary, and junior college) to attain greater mastery of their chosen fields than they can attain in five years of formal study. Of secondary importance is providing the stimulation which will lead some qualified students through an intermediate stage toward the doctorate.

The Certificate of Advanced Study is granted students who satisfactorily complete all requirements of the sixth-year program exacted of students whose major is one of the following: Biological Sciences, Business Administration, Business Education, Chemistry, Earth Sciences, Education, English, History, Industry and Technology, Mathematics, Music, Physical Education for Men, Physical Education for Women, Physics, Political Science, Sociology and Anthropology, or Speech.

The degree Master of Fine Arts is granted students who satisfactorily complete all requirements of the sixth-year program exacted of students whose major is Art.
Credit Requirement

A candidate for the Certificate of Advanced Study or the degree Master of Fine Arts must earn a minimum of 30 semester hours beyond the master's degree or its equivalent with at least a “B” average exclusive of work taken to remove deficiencies. All credit may be concentrated in one major area or distributed in such fashion that a maximum of 10 semester hours credit are earned in fields closely related to the major area. Credit for at least 21 semester hours must be earned in courses given on the campus of Northern Illinois University. Students enrolled in a Sixth-Year Program in Administration (General Educational Administration, The School Principalship, and School Business Management) are required to enroll for full-time study during an eleven-week summer session or during one semester. A full load is 12 semester hours.

Admission

A candidate for admission to the sixth-year program (as distinct from admission to the Graduate School) must (a) hold a master's degree or equivalent from an approved institution whose requirements for the degree are substantially equivalent to those of Northern Illinois University or (b) be in the last semester of work leading to that degree from Northern Illinois University. To be admitted as a classified student working toward the C.A.S. or M.F.A., the student must have an average of 2.5 in the last two years of his undergraduate work and 3.2 in his graduate work. (See admission requirements, p. 34.)

Students previously in attendance in the Graduate School of Northern Illinois University should request permission of the Graduate Office to continue work leading to the Certificate of Advanced Study or the degree Master of Fine Arts. Students from other institutions should submit completed application forms to the Dean of the Graduate School no later than two weeks before registration. A student who holds a master's degree or equivalent from another college or university should request the registrar of that institution to forward three official transcripts of his academic record to the Dean of the Graduate School.

Admission to Candidacy

Admission to the sixth-year program does not necessarily imply that a student is, or may become, a candidate for the Certificate of Advanced Study or the degree Master of Fine Arts. Upon completing 12 semester hours of work at Northern Illinois University and not later than the first month of the final semester, a student shall file application in the Office of the Graduate School for admission to candidacy.

A student will not be admitted to candidacy unless he is following a program of courses approved by his advisory committee.

Credits Transferable

If a transfer of graduate credit is desired, applicants should file a petition with the Dean and request the registrar of any institution concerned to send a transcript to the Office of the Graduate School. Subject to the approval of the Dean and the chairman of the advisory committee, a student will be allowed to transfer a maximum of 8 semester hours of graduate credit from another institution, none of which shall be in extension or correspondence work. The petition must be presented to the Graduate School at the time of application for admission to candidacy.
Advisory System

Each student is assigned an advisory committee appointed by the Dean of the Graduate School upon recommendation of the head of the major department. The committee will review the advisee's selection of a major, help the advisee confirm or revise the selection, assist in planning the program of courses, and evaluate his work periodically.

Program of Courses

Early in his first term or, if feasible, before his initial registration, a student should confer with members of his advisory committee to plan a program of courses leading to the certificate or degree. The original of the program, properly signed, must be filed with the Dean of the Graduate School, a copy being retained by the chairman of the advisory committee and another being given the student. Any changes made necessary in the program shall be by means of a substitution slip, a copy of which shall be filed with the Dean of the Graduate School.

Qualifying Examination

During the first term of his work in the sixth-year program, a student shall successfully complete, at the option of the major department, a qualifying examination. Failure to complete the examination successfully will be considered sufficient cause for drop or probation notice at the discretion of the advisory committee, the head of the major department, and the Dean of the Graduate School.

Government Examination

All students must meet the requirements of Senate Bill Number 195 of the 68th General Assembly of the State of Illinois. In brief, this law requires satisfactory completion of an examination on the Constitution of the United States, the Constitution of the State of Illinois, and the proper use and display of the American flag. Students who have not satisfied the requirement at the undergraduate or fifth-year level must satisfy it at the sixth-year level to receive the Certificate of Advanced Study or the degree Master of Fine Arts.

Credit for Extension Work

With the approval of the major department, a student will be permitted to offer for credit at sixth-year level a maximum of 6 semester hours in extension work taken from this institution. A list of centers approved for graduate extension work may be secured from the Dean of the Graduate School.

Courses for Which Credit Is Allowed

Only courses which are numbered 400-499, 500-599, and 600-699 and which are taught by members of the graduate faculty carry graduate credit. Not more than 9 semester hours of the credit counted toward the Certificate of Advanced Study or the degree Master of Fine Arts may be earned in courses numbered 400-499. Credit for at least 21 semester hours must be earned in courses numbered 500-599.

Some courses numbered in the 400's carry only undergraduate credit. Graduate students enrolled in 400-level courses are responsible for ascer-
taining whether these courses have been approved for graduate credit and whether they are taught by members of the graduate faculty. Only those courses listed in this catalog or in its supplements carry graduate credit.

**Limitation of Time**

Students should so plan their programs at sixth-year level that all work beyond the fifth year toward the Certificate of Advanced Study or the degree Master of Fine Arts will be completed within six consecutive years unless exception is granted by the Graduate Council.

**Thesis**

Every candidate shall submit an original and two carbon copies of a significant research study, field study, or thesis, together with an abstract thereof, approved by a departmental committee. The original, the two carbon copies, and the abstract must be submitted in a standard folder to the Office of the Graduate School. A statement showing approval by the staff members involved must be filed in the Office of the Graduate School at least one week before the candidate appears for his final examination.

**Final Examination**

The final examination of each candidate is administered by the department responsible for the candidate's major area some time within the latter half of the term which marks completion of work for the certificate or degree, but in any case at least one week before such completion. Comprehensive in nature, it is a written and/or oral examination. No later than the end of the first week of the semester during which he plans to take it, the candidate must notify the Chairman of his Advisory Committee of his intent to take the examination.

**Departmental Requirements**

Other than the requirement previously indicated that, unless exception is granted, a candidate for a certificate or degree will be expected to earn a minimum of 20 semester hours credit in his major department, departmental requirements which govern the structuring of programs of study for individual students shall be flexible rather than rigid. The primary aim of Northern's sixth-year program is to help experienced teachers, supervisors, and administrators improve themselves. It is to help these people become master teachers or administrators. Hence emphasis will be placed on individual needs as they are determined by the advisory committee in conferences with the student rather than on adherence to the requirements of a specifically prescribed program.

**Requirements for Doctoral Programs**

**Doctor of Education**

**Doctor of Philosophy**

The doctorate is the highest degree granted by the University. It is conferred only for work of distinction in which the student displays powers of original scholarship. The doctorate will not be conferred merely for accumulating credits.
1. Admission to and Retention in Doctoral Work

   a. Admission—Normally a student will be expected to have bachelor's and master's degrees from Northern Illinois University or from other accredited institutions whose requirements are substantially equivalent to those of Northern. No student will be admitted to doctoral work unless his undergraduate and graduate record (including test scores) indicates ability to do work of high quality in his chosen field.

   According to Graduate School Regulations, a student must have at least a 2.5 average in the last two years of undergraduate work at an accredited institution and approval of the department in which he plans to major to be admitted as a classified student.

   For admission to programs beyond a master's degree, a student must have at least a 3.2 average in graduate work and approval of the department in which he plans to major; provided, that students undertaking doctoral work must have at least a 3.5 average in graduate work at the end of their sixth year of graduate work (30 semester hours beyond the master's), or before being admitted to candidacy for the doctorate, whichever comes earlier.

   Three copies of undergraduate and graduate transcripts should be sent to the Dean of the Graduate School. At least two letters of recommendation are required: one should be from the student's present employer, the other from one of his teachers who is qualified to judge his ability to do graduate work.

   Admission to doctoral work in a specific department may also require passing whatever entrance tests, screening devices, or interviews are required by the individual department and approved by the Graduate Council.

   b. Retention—Retention in doctoral work will depend upon a student's maintaining the honor point average required by Graduate School Regulations: A student who receives 12 semester hours of graduate credit grades below "B" will be disqualified as a candidate for a degree in the Graduate School. A student who receives 6 semester hours of graduate credit grades of "D" or "F" will be dropped from the Graduate School.

   Furthermore, students will be expected to pass whatever qualifying and comprehensive examinations are required and to fulfill the language requirement and other special requirements.

2. Course Requirement—Graduate students working for a doctor's degree will be expected to complete at least three academic years of work beyond the bachelor's degree. This will include formal course work, independent study, research, and dissertation. When translated into semester hours, this will be approximately the equivalent of 90 semester hours credit. A minimum of 24 semester hours of graduate work must be taken at Northern Illinois University. Transfer credit will be allowed at the discretion of the department concerned and of the Dean of the Graduate School. Not more than 25 semester hours credit shall

\[\text{This is in keeping with the regulation that a student may take 16 semester hours toward a master's degree and 9 semester hours toward the C.A.S. or M.F.A. in graduate courses numbered 100-199. A student who begins graduate work at N.I.U. with a master's degree will not be permitted to take more than 9 semester hours in courses numbered 400-199. A student who begins work with a C.A.S., M.F.A., or equivalent will not be permitted to count for credit any additional courses at the 500-199 level.}\]
be in courses numbered 400-499.¹ Most of the work will be in the student’s major field or area of concentration. At the discretion of the student’s major department, some course work may be taken in related fields.

3. Dissertation Requirement—Normally the dissertation and research will be equivalent of about two full semesters’ work (24-32 semester hours). The dissertation will be a substantial contribution to knowledge in which the student displays powers of original scholarship. Its subject must be approved by the student’s adviser or advisory committee. The dissertation will be microfilmed.

4. Language Requirement—Students working toward a Ph.D. must demonstrate a reading knowledge of two foreign languages. The material on which a student is to be examined may be set by the major department, but the examinations will normally be graded by members of the Foreign Language Department. The language requirement must be met before a student is admitted to candidacy.

5. Residence Requirement—Students working toward a doctor’s degree will be expected to spend one academic year of two consecutive semesters in residence.²

6. Qualifying, Comprehensive, and Oral Examinations
   a. After at least one semester (about 12-15 semester hours of work beyond the master’s degree), the student may be required, at the discretion of his major department, to take qualifying examinations which may be written and/or oral and which will test the background of the student in his major and related fields, and his competence to pursue further graduate work. A student who fails this examination may, with the permission of his major department, repeat it after the lapse of at least one semester. A student who fails this examination a second time will not be permitted to continue work toward the doctorate.

   b. When a student has completed most or all of his course work, and not later than eight months before the granting of the doctor’s degree, he will take a written comprehensive examination.² This examination will cover work in the student’s major department and related fields. A student who successfully completes this examination will be admitted to candidacy for the doctorate. A student who fails this examination may, with the permission of his examining committee, repeat it after the lapse of at least one semester. A student who fails this examination a second time will not be permitted to continue work toward the doctorate.

   c. After completing all other requirements for the doctorate (including the dissertation), the student will present an oral defense of his doctoral dissertation before an examining committee.

   d. Committees to conduct examinations will be nominated by the head of the student’s major department and appointed by the graduate dean. Representation on comprehensive and dissertation examining

¹A summer session in which a student earns 12 semester hours credit immediately following, or followed immediately by, a semester in which a student earns 12 semester hours credit will be regarded as the equivalent of one academic year of two consecutive semesters, except in the Department of Education.

²Any department may also require an oral comprehensive examination of all students who have passed their written comprehensives. If this practice is followed, it is to be part of the department’s announced policy. A student who fails this examination may, with the permission of his examining committee, repeat it after a lapse of at least one semester. A student who fails this examination a second time will not be permitted to continue work toward the doctorate.
committees will be such as to insure the presence of professors representing appropriate major and minor fields. The size of the committees will normally be three to five. If a student has taken all his graduate work in one department, the graduate dean will appoint one or more professors in related fields to the examining committee for the oral defense of the doctoral dissertation.

7. Limitation of Time—Students working for a doctor's degree should plan their programs so that all work beyond the master's degree will be completed within seven years unless exception is granted by the Graduate Council.

8. Extension Work—Depending on the number of residence credits transferred from other institutions, from 4 to 8 semester hours in extension work taken at this institution will, with the approval of the major department, be allowed at the fifth-year level; but no further extension credits will be counted toward the Ph.D. or Ed.D.1 No credit will be allowed for extension work taken at other institutions. More detailed requirements for the doctorate in Business Education, Education, English, and History are listed below under the specific departments.

Planning a Program

When departmental programs are under consideration, the student is advised to consult carefully the section of this catalog devoted to requirements for admission to the Graduate School and requirements for the specific program he wishes to pursue.

Departmental offerings will depend largely on the demand. In accordance with this policy, the University may find it necessary in some cases to withdraw courses designated to be offered in a given semester and in other cases to offer courses not designated for the semester. The numerals I and II indicate the semester (or semesters) designated for a course. (Except where prerequisites are stated for the courses listed below, a graduate student is presumed to be eligible for advanced work in a department if he has an undergraduate major in that subject. See above, p. 45, under Deficiencies.)

University Seminars

401. Travel Seminar (1-9)
A study tour of a selected area of the world. Each tour will be under the supervision of one or more faculty members of Northern Illinois University. The purpose of the tour is to provide students, through personal experience, opportunities to increase their knowledge of the educational, social, cultural, and physical environment of other peoples. Lectures and meetings are arranged with qualified people who will discuss these aspects of life. Visits of sufficient duration to observe important places of interest and activities of special interest will be made. Specific details regarding cost, dates, and countries to be visited will be published in a special announcement. Specific requirements for University credit will be announced for each seminar.

500. Interdisciplinary Seminar: The Human Enterprise (3) I, II
For adults and professional people who wish to reinforce their backgrounds in the arts and sciences. Lectures, readings, discussions, and critiques, based on concepts and insights from the natural sciences, psychology, social sciences, philosophy, literature, art, and music, concerning the nature of man and the human enterprise. Various phases of the course conducted by specialists from the disciplines represented. Prerequisite: A college degree.

1In addition to the extension credits allowed at the fifth-year level, from 1 to 6 additional semester hours in extension work taken at this institution will, with the approval of the major department, be accepted toward the C.A.S. or M.F.A.
Department of Accounting

The Departments of Accounting, Management and Finance, and Marketing offer the following graduate programs in Business Administration:

- Master of Science in Business Administration
- Master of Science in Education in School Business Management*
- Certificate of Advanced Study in Business Administration
- Certificate of Advanced Study in School Business Management*

For specific requirements for these degrees, see Business Administration, p. 65.

Course Offerings

ACCOUNTING

400. Industrial Accounting (3)
Survey for business, liberal arts, education, and engineering students. The principles, processes, and executive uses of general and cost accounting, including the concepts and methods of financial control, budgeting, and policy making from a managerial viewpoint. Prerequisite: Consent of instructor

421. Advanced Accounting I (3)
Accounting principles applied to receiver accounts, statements of affairs, estates and trusts, and considerable emphasis on consolidated statements. Prerequisite: Courses 321, 322, 330.

440. Auditing Theory (3)
The principles, practices, and procedures followed in the audit of corporate accounts, preparation of related working papers, and the final audit report. Prerequisite: Courses 321, 322, or concurrent registration.

441. Auditing Practice (2)
The student is required to prepare a complete set of auditing working papers, write a formal audit report, and prepare the income tax return. Prerequisite: Course 440.

453. Managerial Accounting and Controllership (2)
Training in managerial accounting and budgetary control where technical information is utilized for interpreting, coordinating, and formulating policies. The functions, principles, procedures, and techniques in meeting the objectives of the controller as a business administrator. Prerequisite: Course 222.

454. Accounting Systems (2)
The problems involved in the design and installation of accounting systems, including systemizing the clerical departments of a business. Classification of accounts, account codes, ledgers, financial reports, flow charts and function charts. Prerequisite: Courses 321, 322, 330.

455. Individual and Business Taxation (3)
Federal taxes as they apply to the individual and to business. Considerable emphasis upon the individual return, including pay-as-you-go, social security, declarations, and payments.

456. Advanced Federal Taxes (2)
Advanced phases of income taxation with particular attention to corporations, partnerships, estates and trusts, and research problems. Prerequisite: Course 455.

457. Governmental Accounting (2)
Budgets, general funds, bond funds, sinking funds, trusts and agency funds, working capital funds, and special assessment funds. Prerequisite: Course 222.

*These two programs are offered jointly with the Department of Education.
459. Electronic Data Processing in Business (2-3)
   (Also listed as Management and Finance 459)
   Characteristics of EDP, applications to specific fields, economic feasibility of an EDP installation; and problems encountered in converting to and operating an EDP system. Prerequisite: Course 222 or consent of instructor.

460. Accounting for Specific Industries (2)
   Accounting problems and methods as related to various industries and businesses. Prerequisite: Course 321, 322, 330.

470. Budgetary Control (2)
   Budgeting as a principal tool of accounting and management control, covering techniques of general application to most business situations. A practice set provides the transition from the text material to practical applications. Prerequisite: Course 222 or equivalent.

471. Advanced Accounting II (2)
   Development of a framework of accounting concepts for treating partnership formation and dissolution, joint ventures, the specialized income-recognition problems of installment and consignment sales, accounting applications of actuarial science. Prerequisite: Courses 321, 322.

475. CPA Problems (3-5)
   The analysis and review of accounting principles and practices as developed and illustrated in complex selected problems. Discussions of selected problems and theory. Laboratory practice in the solution of typical problems encountered in the CPA examination. Prerequisite: Consent of instructor.

491. Workshop in Accounting Records for Small Business (2-3)
   Development of adequate record systems to conform with tax laws and managerial decisions. Short cuts in cases where data processing is impractical. A research project in determining how other businesses in similar situations operate. Prerequisite: Open to business employees, managers, and owners or by consent of Department Head.

540. Financial Statement Analysis (2)
   Analysis and interpretation of financial reports with particular reference to the construction of statements, the meaning of accounts, ratios, and other evaluating indices.

561. Programming Business Data (2)
   (Also listed as Management & Finance 561)
   For procedure analysts, auditors, punch card supervisors, managers of finance, and accountants. Business data processing problems, standard coding techniques, and a critical examination of accounting problems associated with electronic data processing. Prerequisite: Course 453 or equivalent.

563. Advanced Managerial Accounting and Controllership (2)
   Training in managerial accounting and budgetary control. The use of technical information in interpretation, coordination, and implementation of policy. Functions, principles, procedures, and techniques in meeting objectives of the controller. Prerequisite: Course 440 or consent of instructor.

663. Seminar in Accounting (3)
   The various theories, principles, practices, and procedures in all phases of accounting. Students will investigate independently, and as a group, problems of special interest in the field of accounting.

SCHOOL BUSINESS MANAGEMENT

461. School Office and Personnel Management (2)
   Work simplification of office management; administration of non-certificated school personnel; legal and insurance problems of the school business office.

490. Management of Auxiliary Enterprises (2)
   Budgeting, cost analysis, accounting, and other problems related to food service management, transportation, and school store operation. Prerequisite: Consent of instructor.
495. Maintenance and Operations in School Business Management (2)
Budgeting, scheduling, cost analysis, including a study of problems of maintaining buildings and grounds. Custodian relationships, scheduling, purchasing, record-keeping, supply administration. Prerequisite: Consent of instructor.

541. Accounting, Statement Analysis, and Budgeting (2-3)
Principles of accounting, including a study of budgeting, payroll administration, bonded indebtedness, accounting for receipts and expenditures. Special attention to accounting for extracurricular funds and analysis of statements. Accounting for auxiliary enterprises such as cafeteria, store, etc.

542. Purchasing and Supply Administration (2)
Principles and procedures of purchasing supplies, equipment, and services. Specifications, quality analysis, sources of information, testing materials and services, determination of standards, inventory control, store management, property accounting, etc.

545. School Business Management (2-3)
Management of auxiliary enterprises, including accounting and financial control. Maintenance of buildings and grounds, personnel and office management, transportation, insurance, investments, administration of supplies and equipment, and administrative relationships.

546. Workshop in School Business Management (1-6)
A concentrated program designed to provide maximum participation by each enrollee and directed by a faculty drawn from many sources, such as school administrators, business managers, boards of education, industry, professors, etc. All phases of business management will be considered, and time will be provided for field trips. Open to school business officials and other school personnel. May be audited for no credit.

602. Research in School Business Management (1-3)
Limited to specific problems in school business management; research to be directed by adviser. Prerequisite: Consent of adviser.

610. Seminar in School Business Management (2-3)
The problems involved in the business administration of schools. Concentrated study and research concerned with all phases of school business management, such as accounting and finance, cafeteria management, purchasing, transportation, building planning and construction.

641. Advanced School Fund Accounting and Budgeting (2-3)
Problems in designing systems and procedures in school fund accounting. The application of data processing systems to payroll, inventories, curriculum, personnel, registration procedures, budget, textbook accounting, and other business office functions. Prerequisite: Course 541.
Department of Art

The Department of Art offers graduate programs leading to the degrees Master of Science in Education with a major in Art, Master of Arts, and Master of Fine Arts. Before being admitted to candidacy for a graduate degree, the student may be required to submit a portfolio of his work and/or other evidence of his competency in the arts in addition to the regular admission requirements. The Department reserves the right to retain for its collection any work produced in scheduled classes.

MASTER OF SCIENCE IN EDUCATION

Candidates for the degree Master of Science in Education with a major in Art must present 32 semester hours of work selected from the offerings at the 400, 500, and 600 level. Courses 504 and 507 should be included early in the student's program. The program of study must also include:

1. A minimum of 2 semester hours of Course 509.
2. 6 semester hours in the field of Art History.
3. 10 semester hours outside the major field with the remaining hours selected from the Art Department offerings.

Each candidate will be assigned an adviser who will guide him during the preparation of his thesis and who will also assume responsibility for the preparation and administration of the final departmental examination.

MASTER OF ARTS

The degree Master of Arts is designed for those students who wish to concentrate their study in one of the major expressive areas in art or in the history of art. Included in the student's program of 32 semester hours of graduate study must be:

1. A minimum of 4 semester hours in Course 603.
2. A minimum of 9 semester hours in Art History.

Candidates for the Master of Arts degree in Art History must have a reading knowledge of at least one modern foreign language.

An adviser will be assigned to the student at the time he becomes a degree candidate. He will be responsible for helping the student in the planning of his program, the preparation of his thesis, and in the presentation of his studio work by means of a one-man show.

MASTER OF FINE ARTS

The degree Master of Fine Arts requires 62 semester hours of graduate study. Although the requirements are flexible, depending upon the background and interests of the student, he may expect to complete from 12 to 15 semester hours in Art History, 35 to 40 semester hours in studio courses, and from 8 to 10 semester hours in seminar and thesis.

The student's adviser will assist in planning the program, the preparation of the thesis, the one-man show, and the final examination.

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Course Offerings

406. Modern Art (3)
Painting and sculpture from the new developments of the 19th century to the present in Europe and America.

408. History of Prints and Graphic Processes (3)
A survey of the chief works of art in woodcut, engraving, etching, and lithography from the 16th century to the present day.

425-426. Advanced Prints I (2)-(2) I, II
Developmental continuation of Courses 325 and 326. Studio and lecture. Four periods a week. Course 426 is a continuation of 425.

433-434. Advanced Sculpture I (2)-(2) I, II
Developmental continuation of Courses 333 and 334. Studio and lecture. Four periods a week. Course 434 is a continuation of 433.

437-438. Advanced Oil Painting I (2)-(2) I, II
Developmental continuation of Courses 337 and 338. Studio and lecture. Four periods a week. Course 438 is a continuation of 437.

454. Art in the Elementary School (3) II
Art education in relation to the needs, growth, and developmental patterns of children. Studio and lecture. Not open to Art majors.

460. Creative Photography (3) I, II
The fundamentals of photography with emphasis upon it as a fine art. Studio and lecture. Six periods a week. Prerequisite: Course 221 and a basic course in photography.

480. Independent Research (1-3) I, II
Work on individual problems in the student's chosen field. Consent of Head of Department and instructor.

504. Drawing (3)
Analytical studies of style and composition in the drawing media. Attention will be given to the capacities and limitations of pencil, pen, brush, ink, silverpoint, reed, etc. May be repeated to a maximum of 9 semester hours credit.

507. Advanced Design (3)
Varied and comprehensive problems involving two and three dimensional design in various media.

508. Studies in the Technical Resources of the Artist (3-6)
The media and processes of the artist and their art historical significance. These studies may be directed toward ceramics, printmaking, art metal, or painting. May be repeated to a maximum of 9 semester hours credit.

509. Seminar in Art Education and M.S. Ed. Thesis (2) I, II
The philosophy and practice of art and art education. Supervised introduction to the tools of research in preparation for writing the thesis.

510. Studies in Medieval Art (3) I
Architecture, painting, and sculpture from early Christian times to the end of the Middle Ages.

511. Studies in Italian Renaissance (3)
Representative masters in the historical development of Italian painting, sculpture, and architecture from 1350 to 1600.

512. Studies in Northern Renaissance (3)
Painting and sculpture in The Netherlands, Germany, France, and Spain from 1400 to 1600.

513. Studies in Baroque Art (3) II
Painting, sculpture, and architecture in Europe from 1600 to 1800.

514. Studies in 19th Century Art (3)
Painting and sculpture in Europe and America from the French Revolution until 1900.
515. Studies in American Art (3) Painting in America from 1670 to the present day.

523. Advanced Painting—various media (3) Emphasis on mature studio performance by means of technical knowledge and significant insight. May be repeated to a maximum of 9 semester hours credit.

528. Technical Studies in Printmaking—various media (3) Amplification of the student's abilities and knowledge of printmaking gained in earlier courses, directed toward a more mature productivity. May be repeated to a maximum of 9 semester hours credit.

531. Creative Ceramics (3) Exploration of three dimensional form using fired clay. May be repeated to a maximum of 9 semester hours credit.

533. Creative Sculpture—various media (3) Advanced work in sculpture stressing individual development through the use of a variety of media. May be repeated to a maximum of 9 semester hours credit.

540. Creative Weaving (3) Intensive work in the area of creative weaving. May be repeated to a maximum of 9 semester hours credit.

553. Principles of Art Education (3) The contribution which art can make to individual and group development in the school program. Discussion of problems and procedures. Open only to Art majors.

580. Independent Study (2) Individual research and experimentation beyond that covered in course work. Consent of supervising instructor required. May be repeated to a maximum of 6 semester hours credit.

600. Studies in Primitive Art (3) Prehistoric art; art of the cultures of Africa, Oceania, and the Americas.

601. Studies in Oriental Art (3) Art and architecture of India, China, and Japan in their major periods.

602. Special Problems in Art History (3) Special problems in historical research for students who wish special guidance in reading, methodology, and research in areas of art history. May be repeated to a maximum of 9 semester hours credit.

603. Seminar in Art and M.A. & M.F.A. Thesis (2) Investigation of the theory, history, and technical procedures of the artist in preparation for the thesis. May be repeated to a maximum of 4 semester hours credit on the M.A. and to a maximum of 8 semester hours credit on the M.F.A.
The Department of Biological Sciences offers graduate programs leading to the degrees Master of Science in Education and Master of Science; and at sixth-year level, to the Certificate of Advanced Study. The Departments of Biological Sciences, Chemistry, Earth Sciences, and Physics offer an area major in General Science leading to the degree Master of Science in Education.

MASTER OF SCIENCE IN EDUCATION

Major in Biology

Students who elect a graduate major in Biology toward the degree Master of Science in Education must satisfy the following course requirements in Biology:

(a) 416, 516, or 517; 408 or 540; 542, 561, and 570.
(b) 8 additional semester hours of credit from courses offered on the 400 or 500 levels.
(c) A maximum of 6 semester hours will be devoted to supervised research leading to a qualifying paper.

The prospective graduate student in Biology should obtain the "Handbook for the Graduate Student in Biology" from the office of the Department of Biological Sciences. This booklet provides more detailed information about the program of the department, and the student will be held responsible for a knowledge of the material.

The Biological Sciences Department requires that all graduate students must have achieved a satisfactory grade on the "General Advisory Examination for Biology Graduate Students" before they may obtain an approved graduate program, start on their research work, or take the final comprehensive examination. This examination is administered on the first Saturday after the start of classes in each regular semester or summer session.

Each student should understand that while one academic year is the minimum time for work leading to the degree Master of Science or Master of Science in Education, most students will find that an additional semester or summer session may be essential. If the student has deficiencies, the total number of hours required may exceed 32.

Major in General Science

Students who elect an area major in General Science leading to the degree Master of Science in Education must have completed as undergraduates a major or the equivalent in Biological Sciences, Chemistry, Earth Sciences, or Physics or have completed an undergraduate General Science major. The student is advised to choose not more than three of the four fields mentioned above as his interdepartmental major.

In those science fields where no undergraduate major or equivalent has been earned, the following graduate courses are required:

1. Biological Sciences: 405, 406, 416, and 542 (choose a minimum of 8 hours).
2. Chemistry: 500 and 501 or a minimum of 8 hours chosen with the consent of the Department Head from the 400 or 500 course offerings of the Department.
3. Earth Sciences: 453, 465, 520, and 543 (choose a minimum of 8 hours).

4. Physics: A minimum of 8 hours from the 400 or 500 course offerings chosen with the advice and consent of the Department Head.

MASTER OF SCIENCE

Students who elect a graduate major in Biology toward the degree Master of Science will be required to take a proficiency examination prior to arranging a program of courses leading to the degree. Upon their satisfactory completion of the examination, the program of courses will be prepared. This program will include a minimum of 32 semester hours of work—a maximum of 6 semester hours being devoted to supervised research leading to a qualifying paper.

CERTIFICATE OF ADVANCED STUDY

Students working for the Certificate of Advanced Study in the Biological Sciences must consult with the Head of the Department before planning a program. The requirements will be flexible, the candidate's background and interests being the determining factors. There will be a program of supervised research leading to a thesis.

Course Offerings

GENERAL BIOLOGY

400. Methods and Materials for High School Biology (3) I, II
Aims of biology in the life of the individual and the community and the methods and materials best suited to the development of these aims. Visits to high schools, field trips, and a three-day period at the Taft Campus. Students will pay their own expenses. Offered first nine weeks of each semester. Education 466 should be taken concurrently. Student teaching should be taken the last half of the same semester. Prerequisite: One year of Botany or Zoology equivalent.

401. Principles of School Health (3) I
Planning for school health programs. Methods of promoting healthful school environment. Prerequisite: Courses 255 and 355 or 357.

402. Community Health (3) II
Community health needs, including environmental sanitation and general measures for disease prevention, and the role of governmental and voluntary agencies. Prerequisite: Courses 255 and 355 or 357.

405. Field Course in Natural History (2) Summer
(For teachers in the elementary and secondary schools)
The use of natural materials in teaching. Daily field trips are taken on the Lorado Taft Field Campus and nearby areas. Discussions, demonstrations, visual aids, the identification and preservation of biological specimens, and the study of literature pertaining to the natural history of the area. Prerequisite: Course 305 or teaching experiences. Two weeks. On Taft Campus in summer only.

406. Biological Conservation (3) II
Biological basis of conservation practices and the relationship of those practices to human welfare. Materials and procedures of teaching conservation. Field trips. Prerequisite: A year of Biology

408. Genetics (3) I, II
Principles of heredity. Primarily for the Biology major or minor. Four periods a week. Prerequisite: 8 hours of Biology. College algebra recommended.
409. Cytogenetics (3)
Cell nuclei and the behavior of chromosomes in plants and animals. Chromosome analysis as a tool for the study of evolution. Prerequisite: 8 hours of Biology. Course 408 recommended.

416. General Ecology (3)
Principles and structure of plant and animal communities. Field trips to representative areas, with two overnight trips. Students will pay their own expenses. Five periods a week. Prerequisite: Courses 211, 251, or consent of instructor.

418. Human Heredity (2)
Human heredity in individuals and populations. Primarily for non-biology majors. Three periods a week. Prerequisite: A course in Biology.

458. Optical and Instrumental Methods in Biology (1)
1. Optical equipment, especially the microscope; 2. measuring instruments; 3. homeostasis devices (incubators, water baths, etc.). Two periods a week. Prerequisite: A high school course in physics, or equivalent, and consent of instructor.

491. History of Biology (2)
Origin and development of major ideas and syntheses in biology. Relation between condition of the other sciences and society and advances in biological knowledge. Prerequisite: 8 hours of Biology.

500a. Science Problems of Elementary Grades (2) I, Summer
Development of constructive attitudes toward modern science in relation to problems in the elementary school. Satisfies requirement for Education 584. Prerequisite: Course 305 or consent of instructor.

500b. Methods and Materials for High School Biology (2)
Problems of teaching biology in high school. Current research in this area. Prerequisite: Course 400.

501. Advanced School Health (3)
The school health program as it relates to the administrator and the teacher. Prerequisite: Course 401 or equivalent.

505. Institute of Science for High School Teachers of Biology and General Science (4) I, II, Summer
New information in the fields and the interrelationships among the biological sciences usable in the secondary school. Field trips, lectures by visiting scientists, and individual student projects. May be repeated to a maximum of 12 semester hours, 8 of which may count toward the master's degree.

513. Epidemiology (3)
Causes, detection, and prevention of approximately forty common communicable diseases. Prerequisite: Course 313 or equivalent.

530. Radiation Biology (3)
The effects of radiation upon cells and organisms. The use of radioisotopes in biological problems. Prerequisite: Courses 355, 408 or equivalent, and one year in Chemistry.

540. Experimental Genetics (2) II
Fundamental principles of genetics and cytogenetics illustrated by laboratory work with fruit fly, mold, or other suitable organisms. Laboratory fee—$3.00. Prerequisite: Course 408 or equivalent.

542. Evolution (2) I
Theories of evolution; development of concept of evolution; factors in organic evolution. Prerequisite: Graduate standing.

543. Cytology and Histology (3)
Cell structure and tissue differentiation including both plants and animals. Prerequisite: Courses 211 and 251 or equivalent.

561. Introduction to Scientific Literature (2) I
Practical use of biological literature. Prerequisite: 30 semester hour of Biology.

562. Aquatic Biology (3)
Aquatic environments—physiographic, physical, and chemical—and aquatic life. Collecting, preserving, identifying, and recognizing native animals and plants. Five periods a week. Prerequisite: Courses 211 and 251.
570. Introduction to Research (1-3)  I, II
Lectures and conferences on problems, techniques, and analysis of biological research. Attention given to the problem of writing the qualifying paper. May be repeated to a maximum of 6 semester hours credit. Prerequisite: Consent of Department Head.

661. Seminar (1)  I, II
Special topics in Biology. May be repeated to a maximum of 4 semester hours credit. Prerequisite: Course 561.

670. Special Problems in Biology (1-3)  I, II
Independent study of problems under supervision of adviser appointed by department head. Writing of qualifying paper will be part of work. May be repeated to a maximum of 6 semester hours credit. Prerequisite: Consent of Department Head.

**BOTANY**

410. Plant Anatomy (3)  II
Structure of tracheophytes. Five periods a week. Prerequisite: Course 210.

412. Mycology (3)  II
Culture, morphology, and economic significance of the fungi. Five periods a week. Prerequisite: Course 211.

414. Fresh-water Algae (3)  I
Identification, economic importance, and limnological relations of the algae. Five periods a week. Prerequisite: Course 210.

510. Advanced Plant Physiology (3)
Physico-chemical activities of plant growth and development. Prerequisite: Course 310, Chemistry 211, or equivalent.

512. Plant Pathology (3)
Specific causal agents of plant diseases, their identification, and control measures. Parasitism and the economy of crop diseases. Prerequisite: Course 412 or equivalent.

514. Taxonomy (3)
Fundamental principles of classification of higher plants. Ecological distribution. Prerequisite: One year of Botany.

515. Plant Histology and Microtechnique (3)  II
Practical laboratory methods in botanical (histochemical) and microtechnique including tests for wall and protoplasmic substances. Prerequisite: Courses 310 and 410 or equivalent.

516. Plant Ecology (3)  I
Influence of environmental factors upon plant associations evaluated. Representative communities analyzed in detail. Research techniques used in field and laboratory. Students will pay expenses of field trips. Prerequisite: Course 416 or consent of instructor.

520. Advanced Plant Morphology (3)
Vegetative and reproduction structures and their development. Structural relationships between related groups. Prerequisite: Course 211 and consent of instructor.

**ZOOLOGY**

450. Animal Parasitology (3)  II
Introductory study of animal parasitism. Five periods a week. Prerequisite: Course 251 or equivalent.

451. Protozoology (3)  I
Systematic examination of the protozoa. Five periods a week. Prerequisite: Course 251 or equivalent.

453. Entomology (3)  I
Taxonomic, ecologic, and general economic significance of insects. Five periods a week. Prerequisite: Course 251 or equivalent.
456. Fish and Wildlife (2)
Taxonomy, ecology, conservation, and utilization of natural and introduced forms.
Four periods a week. Prerequisite: Courses 211, 251.

457. Mammalogy (3)
Mammals of the world with emphasis on Illinois forms. Characteristics, ecology,
economic value, and a collection of study skins. Four periods a week. Prerequisite:
Course 251 and consent of instructor.

461. Endocrinology (3)
Ductless glands and their functions. Five periods a week. Prerequisite: Course 356
and consent of instructor.

463. Invertebrate Zoology (4)
Structure, behavior, and classification of major invertebrate types. Six hours a week.
Prerequisite: Course 251 or equivalent.

517. Animal Ecology (3)
Ecology as found in the world of animals; emphasis on application of principles.
Field trips and a student field problem. For Biology majors. Students will pay for field
trips. Five periods a week. Prerequisite: Course 416 or consent of instructor.

553. Advanced Entomology (3)
History of insect classification, rules of nomenclature and procedures in systematic
studies, evolutionary origin of basic insect structure, functional morphology, life cycles,
systematic review of major insect groups and ecology. Saturday field trips and a student
problem. Students will pay expenses of field trips. Six periods a week. Prerequisite:
Course 353 or equivalent.

554. Advanced Embryology (3)
Continuation of Course 354. Detailed study of mammalian development. Assigned
experimental work. Prerequisite: Course 354 or consent of instructor.

555. Advanced Physiology (3)
Functional interrelations of organ systems. Special topics in physiology. Laboratory
consists of experimental techniques and practical demonstrations. Prerequisite: Course
355 and a year of Chemistry.

560. Field Zoology (3)
Collection, preservation, and identification of lower vertebrates and terrestrial and
aquatic invertebrates. Detailed study of habits and life histories of selected forms.
Business Administration

The Departments of Accounting, Management and Finance, and Marketing offer the following graduate programs in Business Administration:

- Master of Science in Business Administration
- Master of Science in Education in School Business Management*
- Certificate of Advanced Study in Business Administration
- Certificate of Advanced Study in School Business Management*

MASTER'S DEGREE PROGRAMS

Major in Business Administration

The purpose of the Master of Science with a major in Business Administration is to provide an opportunity for specialization in the areas of Accounting, Finance, Management, and Marketing as well as to develop a comprehensive understanding at the graduate level of the functions and nature of business.

Students who major in Business Administration must select a total of 32 semester hours in the College of Business and related subject fields. A qualifying paper is required of all candidates for this degree. The course requirements will be determined by consultation with the candidate’s adviser.

Area Major in School Business Management

The recommended courses for School Business Management are:

- Accounting: 459, 461, 490, 495, 541, 542, 545, 546, 602, 610, 641
- Management: 503, 504, 603, 604
- Education: 500, 501, 551, 553, 572, 603, 654, 655, 656, 657, 695A

The course sequence will be determined through joint advisement in the Department of Accounting and the Department of Education, based on the previous preparation and experience of the student. A student in this program may expect to devote about one-half of his time to study in Business Administration and one-half in Education.

CERTIFICATE OF ADVANCED STUDY PROGRAMS

Major in Business Administration

Area Major in School Business Management**

The Certificate of Advanced Study has been established to provide educational programs beyond the master's degree suited to the needs, interests, abilities, and experiences of qualified candidates for advanced study.

Programs of study are offered leading to the Certificate of Advanced Study in Business Administration and School Business Management, in conformity with the general requirements of the Graduate School.

The course sequences for each program of study will be determined through consultation with the candidate's adviser.

*These two programs are offered jointly with the Department of Education.
**For special requirements for the Certificate of Advanced Study, see Department of Education, page 89.
Department of Business Education

The Department of Business Education offers the following graduate programs: a major in Business Education leading to the degree Master of Science in Education, a sixth-year program leading to the Certificate of Advanced Study in Business Education, and a doctoral program leading to the degree Doctor of Education.

MASTER OF SCIENCE IN EDUCATION
Major in Business Education
Students who elect a graduate major in Business Education toward the degree Master of Science in Education must satisfy the following course requirements in Business Education:
(a) Courses 500 or 510, 501, 502.
(b) Additional semester hours of credit to make a total of 22 to be selected from courses offered on the 400, 500, and 600 levels in Business Education and/or Business Administration.

CERTIFICATE OF ADVANCED STUDY
Major in Business Education
The Certificate of Advanced Study has been established to provide educational programs beyond the master's degree suited to the needs, interests, abilities, and experiences of qualified candidates for advanced study.

Programs of study are offered leading to the Certificate of Advanced Study in Business Education in conformity with the general requirements of the Graduate School.

DOCTOR OF EDUCATION
Students desiring to arrange graduate programs at the doctoral level in Business Education are to be permitted considerable flexibility in the selection of graduate Business Education courses. The type of program arranged will depend upon the student's undergraduate preparation, his present position, and his plans for the future. The following general requirements for doctoral study apply to all applicants.

I. General Requirements
A. All doctoral candidates in Business Education must meet the undergraduate requirements of this university. If deficiencies exist in either the Business Education or Business Administration areas, such requirements must be fulfilled without graduate credit.
B. Full-time teaching experience for three years is required for admission to candidacy for a doctor's degree.
C. For admission to the doctoral program, see Graduate School Policy on page 51. The master's degree must have been received prior to admission to candidacy for the doctoral program.
D. Residence. At least two semesters of residence on campus is required. The total program requires the equivalent of three academic years beyond the bachelor's degree. The minimum number of hours, including the dissertation, is 96. It is hoped that financial aid in the form of fellowships will be available for some candidates during their period of residence.
E. Language Requirement. Candidates are required to take two courses in statistics unless the candidate wishes to present a reading knowledge of one foreign language in lieu of one course in statistics.

F. Thesis. A project must be presented which is based on special investigation of a subject of importance to the candidate's professional work. The dissertation may be concerned with a significant phase of educational theory or practice, or it may be a scholarly interpretative study in some important area in the subject-matter field. An oral examination will be given on the thesis.

G. Examinations. All candidates will be required to take any psychological examinations prescribed by the University for doctoral candidates. In addition, Business Education candidates will be required to take the Cooperative English test published by the Educational Testing Service (or its equivalent) at the beginning of the first summer or semester on campus. For new students with a master's degree, an achievement test in Business Education will be administered by the Business Education Department. A written comprehensive examination will be given and read by the student's committee after completion of 75 hours of graduate course work. This examination will cover the major and related fields which the candidate is presenting. A follow-up oral comprehensive examination will then be administered by the student's committee.

II. Specific Requirements

DOCTOR OF EDUCATION with a Major in Business Education (at least three years of teaching experience required)

The student's committee will be composed of three people from the Business Education Department, one from Business Administration, one from Education, and one person at large. The chairman of the committee will be a graduate faculty member from the Department of Business Education.

1. AREA OF CONCENTRATION ...................................................... 60 hours

   Major in Business Education ........................................... 20-40*
   Ed.D. Dissertation ......................................................... 10-25
   Business Administration (Accounting, General Business, Finance, Marketing, Management, School Business Management)
   Management & Finance 423, Statistics, to be included

2. EDUCATION ................................................................. 12-28 hours

   Graduate Background Courses in Education
   Recommended Courses
   500—Social Foundation of Education ................................ 3
   501—Psychological Foundations of Education ...................... 3
   504—Philosophical Foundations of Education ...................... 3
   533—Curriculum Theory - or - 535—Secondary School Curriculum 3

3. RELATED FIELDS ........................................................... 9-18 hours

   Minimum Requirements .................................................... 96 hours

*Electives from Business Administration may be substituted for Business Education, as determined by the student's background and needs.
Course Offerings

401. Methods of Teaching Bookkeeping (2)  I, II
Methods of teaching bookkeeping-accounting on the secondary school and junior college level through an analysis of objectives, approaches, methods of presentation, testing, and materials. Four periods a week for nine weeks.

402. Methods of Teaching General Business Subjects (2)  I, II
Content, objectives, materials, and specific methods of presentation as they apply to such non-skill subjects as general business, business law, business economics, salesmanship, business organization, etc. Four periods a week for nine weeks.

403. Methods of Teaching Shorthand (2)
Methods of teaching Gregg Shorthand Simplified, guidance and selection of students, motivation, dictation skills, transcription, standards, testing and grading procedures. Four periods a week for nine weeks. Prerequisite: Course 313; Education 302 or equivalent.

404. Methods of Teaching Typewriting (2)
Principles of skill development, motivation, error analysis and remedial treatment, standards and grading, equipment, comparison of textbooks, grade placement. Required of all teaching majors. Four periods a week for nine weeks. Prerequisite: Course 203.

405. Methods of Teaching Distributive Education (2)
Principles, aims, methods, and materials in distributive education. An opportunity will be provided to plan and prepare course syllabi or to set up high school programs in distributive education.

406. Administration of Distributive Education (2)
An understanding of the organization and administration of distributive education. Types of programs; organization of distributive education programs; teacher requirements; selection of students; course content; and relationship of federal, state, and local institutions to distributive education.

407. Retailing Practice for Teachers of Distribution (4)
Students in this course are expected to obtain practical retail experience in approved businesses and to present a satisfactory report concerning specific retail practices and procedures based on actual experience and observation. Through case and conference methods, students study problems of coordinating the distributive education program with retail practices. Hours to be arranged.

415. Consumer Economics (3)
The economic concepts relative to the consumption of goods and the effective use of services, money, and property. Not open to Business Administration majors.

500. Principles and Problems of Business Education (3)
The characteristics of present-day business education in terms of its basic principles and typical practices, problems, and trends.

501. Introduction to Research in Business Education (3)
Research which has been completed in business education during recent years. The methods, techniques, and procedures of research that may be applied to business education.

502. Independent Research in Business Education (1-3)
With the approval of the major adviser, a student may select a project on which to work during the term, either in the field or in the library, meet regularly with the adviser for consultation and guidance, and prepare a research paper as a culmination of study. 2 semester hours must be allocated to the writing of the qualifying paper. May be repeated to a maximum of 6 semester hours credit.

510. Administration and Supervision of Business Education (3)
General managerial problems of business education in the secondary school, designed for in-service business teachers. Curriculum construction and material, student measurement and evaluation, classroom supervision and rating, physical layout, and administration of supplies, textbooks, and equipment.

515. Guidance in Business Education (2)
Principles and practices in guidance applied to secondary business education students. Educational and vocational counseling and occupational information pertaining to business.
516. Practice and Problems in Cooperative Business Education (4)
Students will obtain practical distributive or office experience in approved businesses and present a satisfactory report concerning specific distributive or office practices and procedures based on actual experience and observation. Through case and conference methods, students study problems of coordinating the cooperative business education program in high schools and collegiate institutions.

517. Administration of Cooperative Business Education (2)
The organization, administration, and supervision of vocational business programs in the distributive and office occupations. Types of cooperative business education programs; teacher requirements; selection of students; and relationships of federal, state, and local institutions to cooperative business education.

518. Methods of Teaching Cooperative Business Education (2)
The aims, methods, and materials employed in the coordinating and teaching of cooperative business courses.

519. Problems in Business Communications (2)
Objectives, subject matter selection, presentation, achievement standards, and evaluation related to various business communication forms in the secondary and collegiate schools. Major problems facing teachers in the subject matter area.

520. Improvement of Instruction in Stenography (3)
Teaching techniques and an evaluation of research in methodology for the purpose of improving the instruction in shorthand and transcription. Remedial practices, methods of motivation, and the use of classroom materials will be discussed through an exchange of ideas and experiences.

521. Improvement of Instruction in Typewriting (3)
Methods of improving the techniques of teaching typewriting through an examination of current research and the discussion of such problems as typewriting in the curriculum; objectives; testing and grading for beginning, advanced, and personal-use classes; remedial practices; motivation; and the use of materials and supplies.

522. Teaching Procedures in Bookkeeping and Accounting (3)
The problems and techniques in the teaching of bookkeeping. The place of bookkeeping in the curriculum, methods of motivation, the use of visual aids and practice sets, testing and grading, and problems of individual teachers.

523. Methods and Materials in Teaching General Business (3)
Improvement of the techniques of teaching the general and social-business subjects generally found in the secondary school business curriculum. An evaluation of classroom materials, methods, research, and current trends through a mutual exchange of ideas and experiences.

525. Evaluation and Measurement in Business Education (2)
The kinds and uses of tests in both skill subjects and general business subjects; evaluation of available tests in the various business education subjects; construction of tests in the various business subjects.

530. Seminar in Consumer Problems (3)
Personal budgeting; the cooperative movement; consumer standards and grade labels; governmental aids for consumers; the buying of shelter, insurance, and investments; the use of installment buying and other forms of credit.

535. Adult Education Programs in Business Education (2)
Problems in curriculum, selection and training of instructors, and the promotion of evening school courses for adults. Analysis of content of course work offered and the methods of developing a coordinated program.

540. Supervision of Student Teachers in Business Education (2)
For persons who plan to supervise student teachers. Principles and techniques for secondary and college teachers in supervising student teaching and other professional laboratory experiences with emphasis on special problem areas in the business subjects, in both the skill and nonskill courses. Prerequisite: 12 semester hours credit in Education and teaching experience.
550. Practicum in Office Machines (3)
Objectives, organization, equipment and layout, content, standards, and methods of teaching office practice. Operation of common office machines.

590. Workshop in Business Education: Principles and Problems (2-3)
Principles and problems in business education. Especially designed for experienced business educators and school administrators of secondary and collegiate institutions. Current practices, administration and supervision in business education. Lectures, individual projects, field trips, and laboratory sessions. May be repeated once.

591. Workshop in Methods of Teaching Business Subjects (2-3)
For experienced teachers of business subjects in secondary and collegiate institutions. New developments in the teaching of various business subjects are studied through discussion, demonstration, and practice supplemented by presentations from specialists in the field. May be repeated once.

600. Seminar in Business Education (3)
The principal theories, practices, and procedures of establishing and maintaining relationships between business education and the total school administrative program. Students are expected to investigate problems of special interest within the field of business education.

610. Curriculum Construction in Business Education (2)
Problems and methods in business education curriculum construction in secondary schools, together with underlying philosophies of curriculum making. Study and evaluation of existing city and state business education programs.

612. Preparation of Teachers in Business Education (3)
Issues and problems in business teacher education, curriculum, certification, professional standards, recruiting and selection, experimental programs and research.

631. Seminar in Personal and Family Finance (2)
A concentrated, intensive study in the area of personal economic education. Financial planning, consumer buying, housing, taxes, insurance, social security, consumer credit, money and banking, and investments. Lectures by experts in each of these areas. Attention to both personal and professional application.

640. Business Education in the Post-Secondary School (3)
Organizational plans, curriculum construction, and staffing problems of business colleges, junior college, 4-year colleges, and universities.

645. Research in Business Education (3)
Advanced methods and techniques of research involving statistical analysis and data processing employed in investigation of business education problems. Suggested for all doctoral candidates.

650. Independent Study in Business Education (2-4)
Opportunity to pursue individual study and analysis of problems in business education of particular interest and value to the student. For people who have completed the master's degree requirements.

699. Dissertation (10-25)
Department of Chemistry

The Department of Chemistry offers programs leading to the degrees Master of Science and Master of Science in Education and, at the sixth-year level, to the Certificate of Advanced Study. The Departments of Biological Sciences, Earth Sciences, and Physics cooperate to offer an area major in General Science leading to the degree Master of Science in Education. (A bulletin describing the Chemistry graduate program is available from the Department Head on request.)

MASTER OF SCIENCE

A candidate seeking to qualify for the degree Master of Science with a major in Chemistry shall satisfy the following departmental requirements in addition to satisfying University graduate requirements.

a. The candidate shall meet the chemistry, physics, and mathematics requirements for the B.S. degree in Chemistry at Northern Illinois University.

b. The student is required to take background examinations in the fields of physical, organic, inorganic, and analytical chemistry prior to registration. These examinations are usually given a week before registration for the purpose of aiding the adviser in the preparation of a course of study for the candidate and to aid in counseling the candidate as to the advisability of continuing in the program for the M.S. degree.

c. A minimum of 32 semester hours of graduate work is required, of which a maximum of 15 hours may be in research.

d. The student must successfully complete three courses in a major field of chemistry, two courses in a minor field (in chemistry or a closely related field), and another course in a field (chemistry or closely related field) not included in the major or minor.

e. The student must pass a reading examination in one of the following languages: German, Russian, or French.

MASTER OF SCIENCE IN EDUCATION

Major in Chemistry

Students who elect a graduate major in Chemistry leading to the degree Master of Science in Education must take a minimum of 11 semester hours from the graduate catalog offerings of the Department of Chemistry.

Area Major in General Science

Students who elect an area major in General Science will find the requirements listed on page 60.

CERTIFICATE OF ADVANCED STUDY

The Certificate of Advanced Study may be awarded to students pursuing programs in Chemistry beyond the master's degree.

This certificate is given in accordance with the general requirements of the Graduate School to those students following a sequence of courses approved by the Department Head or by the assigned adviser.

The program of courses to be taken will be drawn up with consideration being given to the student's interests and background.
Course Offerings

407. History of Chemistry (2)
Historical development of the important theories of chemistry, covering the origins, critical periods of development, and the personalities of famous chemists who contributed. Prerequisite: At least one year of college chemistry.

408. Chemical Literature (2)
The use of chemical literature. Two lecture periods a week. Prerequisite: Course 331 and one year of college German or equivalent.

410. Inorganic Preparations (3) II
Application of fundamental principles in inorganic chemistry. Preparation and purification of selected inorganic compounds. One lecture and two three-hour laboratory periods a week. Prerequisite: Course 411 or equivalent.

411. Inorganic Chemistry (3) I
Advanced concepts of inorganic chemistry and deeper study of the reactions of the more familiar elements and their compounds; correlation of structures and properties. Three lecture periods a week. Prerequisite: Course 440.

420. Quantitative Analysis (5) I, II
Principles and practices of gravimetric and volumetric analysis. Three lectures and two three-hour laboratory periods a week. Prerequisite: Course 211 and Mathematics 220. Not offered for graduate credit for the M.S. in Education with a major in Chemistry or the M.S. in Chemistry.

421. Advanced Chemical Analysis (3)
Application of the fundamental principles of analytical chemistry in a series of selected determinations. One lecture and two three-hour laboratory periods a week. Prerequisite: Course 420. Not offered for graduate credit for the M.S. in Chemistry.

425. Instrumental Analysis (3) II
Instrumental techniques including (among others): spectrophotometry, polarography, colorimetry, potentiometry, conductance, and gas chromatography. One lecture and two three-hour laboratory periods a week. Prerequisite: Course 440 or consent of instructor.

430. Organic Preparations (3)
Synthesis of representative organic compounds by application of fundamental organic reactions. One lecture and five laboratory periods a week. Prerequisite: Course 331 or equivalent.

432. Qualitative Organic Analysis (3) II
Organic group reactions. Identification of organic compounds and mixtures by characteristic reactions. One lecture and five laboratory periods a week. Prerequisite: Course 331.

435. Biological Chemistry (4) I
Chemistry of biological processes. Three lectures and one three-hour laboratory period a week. Prerequisite: Course 331.

436. Advanced Biological Chemistry (2)
Detailed study of the intermediary metabolism of certain classes of biologically important compounds. Two lecture periods a week. Prerequisite: Course 435.

437. Advanced Biochemical Techniques (3)
Theory and practice in the use of current biochemical techniques, such as microbiological assays, chromatographic techniques, use of radioisotopes in biological systems. One lecture and two three-hour laboratory periods a week. Prerequisite: Course 435.

440. Physical Chemistry (3) I, II
Study of the gaseous, liquid, and solid states; thermodynamics; chemical equilibrium. Four lecture periods a week. Prerequisite: Course 420, Mathematics 321, Physics 251. Not offered for graduate credit for the M.S. (Chemistry) or the M.S. in Education with a major in Chemistry.

441. Physical Chemistry (3) I, II
Solutions, phase rule, kinetics, electrochemistry. Four lecture periods a week. Prerequisite: Course 440. Not offered for graduate credit for the M.S. (Chemistry).
442. Introduction to Radiochemistry (2)  
Nuclear and isotopic chemistry. Properties and uses of radioactive isotopes. Health hazards and protection. Application to chemical problems. Detection equipment. Two lectures a week. Prerequisite: Course 440 or consent of instructor.

443. Radiochemistry Laboratory (2)  
Fundamental counting techniques. Tracer techniques. Two three-hour periods a week. Prerequisite: Course 442 or concurrent registration in 442.

444. Physical Chemistry Laboratory (2)  
Two three-hour laboratory periods a week. Prerequisite: Course 440.

445. Laboratory Technique (3)  
Procedures and methods of purification of liquids, solids, and gases. Design, construction, and use of modern laboratory equipment, including glass blowing and electronic instrumentation. One lecture and two three-hour laboratory periods a week. Prerequisite: Course 440.

499. Teaching of Physical Sciences (2)  
Objectives of the teaching of the physical sciences in the secondary schools. Classroom and laboratory problems confronting the secondary school teacher. Four lectures a week for nine weeks. Prerequisite: Physics, Chemistry, or General Science major.

500. Advanced Principles of Chemistry (4)  
Fundamental particles, atomic structure, electronic configuration, periodic system, chemical bond, elementary organic and biochemistry. For secondary teachers. Not open to Chemistry majors for credit. Prerequisite: One year of college chemistry.

501. Advanced Principles of Chemistry (4)  
Energy relations in chemistry, chemical equilibrium, oxidation-reduction, acids and bases, complex ions. Methods of chemical separation and measurement. For secondary teachers. Prerequisite: Course 500.

505. Institute for Science Teachers (1-8)  
Lecture, demonstrations, laboratory work, and field trips, designed for the science teacher. Subject matter from chemistry, physics, biology, and earth sciences. May be repeated to a maximum of 16 semester hours credit. Invitation by Institute Director is required.

510. Theoretical Inorganic Chemistry (3)  
Modern treatment of principles of inorganic chemistry emphasizing chemical bonding, stereochemistry, coordination compounds, as well as other selected topics. Prerequisite: Course 411 or equivalent.

511. Advanced Inorganic Chemistry (3)  
Extension of Course 510 with emphasis on periodic properties, acids and bases, and non-aqueous solvents. Prerequisite: Course 510.

515. Chemistry Seminar (1)  
Discussion of selected topics in chemistry under staff supervision. May be repeated to a maximum of 4 semester hours credit. Prerequisite: Graduate standing and consent of instructor.

522. Modern Analytical Chemistry (3)  
Survey of principles useful to modern analytical chemistry. Non-instrumental methods of analysis are stressed. Prerequisite: Course 441.

530. Theoretical Organic Chemistry (4)  
Mechanism and structure in organic chemistry including structural theory, stereochemistry, and the study of the reactive intermediates of organic chemistry. Prerequisite: Course 441 or equivalent.

531. Organic Reactions (3)  
Analysis and classification of organic reactions using modern organic chemical theory. Prerequisite: Course 530 or equivalent.

541. Chemical Thermodynamics (3)  
Fundamental laws of thermodynamics and applications to chemical problems. Calculation of thermodynamics quantities. Prerequisite: Course 441.
542. Kinetics (3) II
Theories and application of rates of chemical reactions including reactions in the gas phase and in solution. Applications of kinetics in the determination of reaction mechanisms. Prerequisite: Course 441.

543. Atomic and Molecular Structure (3) II
Quantum theory, spectra, and chemical bonding. Determination of atomic and molecular structure. Prerequisite: Course 441 and Mathematics 420.

547. Quantum Chemistry (3)
Introduction to quantum mechanics and its application to chemical problems. Prerequisite: Course 543.

549. Statistical Thermodynamics (3)
Principles of statistical mechanics and application to the calculation of thermodynamic properties. Prerequisite: Course 541 or equivalent.

555. Electroanalytical Chemistry (3)
Advanced theoretical principles of analytical chemistry based on the use of electrochemical theories. Prerequisite: Course 425 or equivalent.

600. A-B-C-D-E Special Topics in Chemistry I, II
A—Inorganic (1-9)
B—Analytical (1-9)
C—Organic (1-9)
D—Physical (1-9)
E—Biological (1-9)

Lectures, discussions, and reports on topics of special interest in a particular field of chemistry. 1 to 9 semester hours credit as scheduled; course may be repeated in one or more fields of chemistry. The maximum number of credits is to be 9 in any field of chemistry. Prerequisite: Graduate standing and consent of instructor.

619. Research (1-15) I, II
The individual investigation of a special problem under the supervision of an adviser. This work normally culminates in the writing of the thesis or qualifying paper. May be repeated to a maximum of 15 semester hours credit towards the M.S. degree. For the M.S. in Ed. a maximum of 6 hours may be earned for a non-laboratory investigation. An additional 15 hours may be earned towards the Certificate of Advanced Study. Prerequisite: Graduate standing and consent of instructor.
Department of Earth Sciences

The Department of Earth Sciences offers graduate programs leading to the degrees Master of Science in Education with a major in Earth Sciences or in Geography; Master of Science with a major in Geography or in Geology; and, at the sixth-year level, a program leading to the Certificate of Advanced Study. The Departments of Biological Sciences, Chemistry, Earth Sciences, and Physics offer an area major in General Science leading to the degree Master of Science in Education.

MASTER OF SCIENCE IN EDUCATION

Major in Earth Sciences

A student who elects a major in the Earth Sciences toward the degree Master of Science in Education must satisfy the following course requirements in the Earth Sciences*:

(a) one year (8 semester hours) undergraduate credit in each of the fields of Geography, Geology, and Meteorology or graduate courses Geography 434, 437; Geology 443, 444; and Meteorology 448, 470, respectively.
(b) 10 semester hours outside the Department of Earth Sciences.
(c) a minimum of 6 semester hours of graduate credit from each of the three fields: Geography, Geology, and Meteorology at the 400, 500, & 600 levels.
(d) remainder of 32 hours to be selected from Courses 460, 534, 543, 545, 547, 557, 562, and 570.

A candidate for this degree will meet the academic requirements of comprehensive examinations and will write a master's qualifying paper. Admission to the program will be by consent of a faculty advisory committee.

Major in General Science

Students who elect an area major in General Science will find the requirements listed on page 60.

Major in Geography

A student who elects a major in Geography leading to the Master of Science in Education degree is required to have a deficiency hearing with a committee selected by his adviser before arranging a program of courses. A total of 32 semester hours of graduate credit will be required with at least 20 semester hours from the major field, of which 17 semester hours must be in subject matter courses. A candidate for this degree will also meet the academic requirements of a comprehensive written examination and will write a master's qualifying paper.

MASTER OF SCIENCE

Major in Geography

A student who elects a major in Geography leading to the Master of Science degree is required to have a deficiency hearing with a committee selected by his adviser before arranging a program of courses. A total

*Graduate students not majoring in Earth Sciences may elect graduate courses offered in this major if they meet the prerequisites listed or show credit for Course 520.
of 32 semester hours of graduate credit will be required with at least 20 semester hours from the major field.

Additional requirements:
  a. reading comprehension of a foreign language
  b. a course in statistics approved by the department
  c. a comprehensive written examination
  d. a master's qualifying paper

Major in Geology

Students who elect a major in Geology leading to the Master of Science degree must satisfy the following requirements. A total of 32 semester hours of graduate credit will be required, with at least 24 semester hours from the major field. The courses to be taken will be selected with the advice of the faculty adviser or advisory committee. A candidate for this degree will meet the academic requirements of a comprehensive examination and will write a master's qualifying paper. Admission to the program will be by consent of a faculty advisory committee.

CERTIFICATE OF ADVANCED STUDY

Candidates for the Certificate of Advanced Study in the area of Earth Sciences should consult with the Head of the Department.

Course Offerings

EARTH SCIENCE AND METEOROLOGY

429. Field Geology (1-3) Summer
   The origin and development of local landforms. For teachers and laymen. One-hour lectures given once weekly, prior to Saturday field trips. Six Saturday field trips. Prerequisite: Consent of instructor.

439. Aviation Institute (3-4) Summer
   The relationship of aviation and space developments to the earth sciences. Basic principles of flight, navigation, meteorology, air traffic control, and airport facilities. Flight experiences and field trips to commercial and military bases. To meet some aviation education needs of elementary and secondary school teachers. Four weeks. Prerequisite: Junior, senior, or graduate standing.

448. Meteorology for Science Teachers (3) II, Summer
   To introduce the secondary school teacher to some of the basic principles of meteorology such as physical principles governing the atmosphere, weather systems, clouds, and instruments.

449. Earth Science Teaching Procedures for Elementary and Secondary Teachers (3) I
   For students who are interested in earth science teaching and supervision. The place of geology and geography in the curriculum. Study trips taken and wide use made of recent earth science books and teaching tools adapted to the public school levels of instruction. Prerequisite: Consent of instructor or major or minor in this field.

453. Regional Problems in Conservation (3) II, Summer
   The social or human elements in conservation practices as they are related to the scientific aspects of natural resources conservation. Prerequisite: Course 353 or consent of instructor.

460. General Research Methods in the Earth Sciences (2) II, Summer
   A general research course covering the following: definition of research; scientific methods, technical, logical, and quantitative methods and techniques.
### Earth Sciences

465. Field Mapping and Techniques in Geography (2)  
Field observations, techniques, record taking, mapping and interpreting the geography of a local area. Prerequisite: Course 101 or 200 and major or minor in Department.

470. Regional Climatology (3)  
The distribution of climate and its cause. Prerequisite: Course 370.

474. Micro-climatology (3)  
The effect of factors of climate in limited regions. Prerequisite: Course 370 or 372.

480. Introduction to Dynamic Meteorology (5)  
Meteorological thermodynamics, equations of motion, vorticity equations, continuity equation, etc. Prerequisite: Mathematics 418 and Physics 251.

481. Dynamic Meteorology (3)  
Continuation of Course 480. Prerequisite: Course 480.

485. Physical Meteorology (3)  
Selected topics in atmospheric visibility, terrestrial and solar radiation, and precipitation physics. Prerequisite: Course 480 or consent of instructor.

505. Institute of Science for High School Teachers of Earth Sciences and General Science (1-8)  
New information in the fields and the interrelationships between the earth sciences usable in the secondary school. Field trips, lectures by visiting scientists, and individual student projects. Prerequisite: Teaching experience in science.

520. Earth Science for Public School Teachers (3)  
The principles and applications of earth science which are usable in the elementary and secondary schools. Discussion and student reports. Satisfies requirements for Education 584. It (or equivalent) will meet prerequisite requirements for graduate courses in the Earth Science major.

545. Matter and Energy Relations in Space (3)  
A descriptive study of matter and energy in space; a ratio and proportion study of the casual relations between physical and chemical properties and of the forces which bring about changes in our universe. Recommended as a free elective.

547. Oceanography (3)  
Describing and relating the information from the various marine sciences in the study of the chemical, physical, and biological nature of the world's oceans.

557. Survey of Literature in the Earth Sciences (1-3)  
Individual reading directed to those phases of literature which are needed for critical thinking in earth sciences. May be repeated to a maximum of 6 semester hours credit.

560. Procedures and Techniques in Reporting of Research in the Earth Sciences (2)  
The procedures and techniques for reporting the results of original investigations. Prerequisite: Eligibility to do graduate research in the Earth Science Department.

570. Special Problems in Earth Sciences (1-3)  
Independent study of problems made under the supervision of adviser appointed by the department head. Writing of qualifying paper will be a part of work. May be repeated to a maximum of 6 semester hours credit.

670. Independent Research in Geology or Geography (1-3)  
Individual investigation of special problems in the fields of either Geology or Geography under supervision of one or more staff members. May be repeated to a maximum of 6 semester hours credit. Prerequisite: 22 hours of graduate work in the Earth Sciences.

### Geography

402. Geography of Soils and Vegetation (3)  
Geographic interpretation of soils, soil groups and associations, as products of other environmental factors, with special attention to relationships between soil characteristics and the forms and patterns of vegetation. Prerequisite: Course 101 or 200-201 or consent of instructor.
434. Agricultural Geography (3)  
The factors that help explain the nature and distribution of crop farming and animal husbandry in various parts of the world. Prerequisite: Course 101 or 200-201 or consent of instructor.

437. Industrial and Commercial Geography (3)  
The factors that help explain the nature and distribution of manufacturing, transportation, and trade in various parts of the world. Prerequisite: Course 101 or 200-201 or consent of instructor.

450. Geography of Illinois (2)  
An intensive regional study of the state. The relationship and significance of various regions to each other and to the whole United States. Prerequisite: Course 101 or equivalent.

451. Political Geography (3)  
Relation of the physical and social environments of human groups with the political character of the state or nation to which they belong and in which they live. A world survey of political geography. Prerequisite: Course 101 or equivalent.

456. Advanced Cartography and Graphics (2)  
Special problems in cartographic design and symbolization. Statistical graphs and charts, layout and overlays, reproduction methods. Prerequisite: Course 255 or consent of instructor.

458. Geography of the U.S.S.R. (3)  
The U.S.S.R. from both a topical and regional approach. An attempt is made to obtain an accurate appraisal of the natural resources base of Russia as well as an estimate of her industrial and agricultural strength. Prerequisite: Course 101 or equivalent.

462. Urban Geography (2)  
An application of geography to the interpretation of urban settlement. The nucleated settlement in regard to its structure, functional base, and as a regional center. Prerequisite: Course 101 or 200.

534. Advanced Studies in Landform Analysis (3)  
Landforms analyzed on the basis of their characteristics to illustrate and improve methods of description, classification, and the portrayal of their geographic arrangement. Prerequisite: Course 442 or 443, or consent of instructor.

543. Advanced Regional Climatology (3)  
Intensive study of the climates of selected regions of the earth’s surface from the viewpoint of dynamic and synoptic climatology; the relationships between these climates, their natural vegetation, landforms, and soils. Prerequisite: Course 370 or 470, or consent of instructor.

550. Vegetation Regions of the World (3)  
Plant physiognomy on an ecologic basis, including climatic, edaphic, and cultural factors that condition vegetation patterns and transitions. Prerequisite: Consent of instructor.

562. Advanced Studies in Land Utilization (3)  
Detailed examination, using the problem approach, of the major physical and cultural factors influencing the nature and pattern of land utilization. Prerequisite: Course 434 or 437, or consent of instructor.

568. History of Geographic Thought (2)  
The evolution of concepts pertaining to the nature, scope, and methodology of geography since classical times; major emphasis on the modern period. Prerequisite: Consent of instructor.

652. Seminar in Commercial Geography (3)  
An investigation and analysis of the structure and patterns of world trade with particular reference to commodities, transport means, and transit and terminal facilities.

667. Seminar in Regional Geography (3)  
Topics pertaining to the nature of the geographic region will be discussed, and students will work on problems concerning a particular area of the world. May be repeated once.
GEOLOGY

400. Sedimentation (3)  
A quantitative analysis of the properties of sediments and sediment deposition. Methods of analysis of modern sediments utilized as a basis for classification in recent and ancient environments. Three lectures, one two-hour laboratory. One field trip. Prerequisite: Mathematics 220.

401. Stratigraphy (3)  
Introduction to principles of stratigraphy and study of selected invertebrate faunas and stratigraphic sections of North America. Prerequisite: Courses 240, 340.

404. Summer Field Course (6)  
Attendance at a departmentally approved geology field camp.

440. Optical Mineralogy (3)  
The optical, chemical, and physical properties of rocks and minerals. Emphasis on the critical use of the microscope in the identification of rock materials. Two lectures, two two-hour laboratories. Prerequisite: Courses 346, 340, and Mathematics 221.

441. Petrology (3)  
The classification and origin of rocks based on thin section examination. Prerequisite: Course 440.

442. Geomorphology (3) I, Summer  
The origin and development of typical landforms throughout the world. Past landforms and processes of formation. Prerequisite: Course 443 or 342 or consent of instructor.

443. Regional Physiography (3) I  
The principal relief features of North America. A systematic textbook and laboratory manual study of the physiographic provinces of North America. Field trip required. Prerequisite: Course 220 or consent of instructor.

444. Economic Geology (Metallic Minerals) (2)  
The nature, origin, and accepted refinement methods of the metallic mineral reserves of the world. Special reference to their recovery costs and problems. Classroom work is supplemented by hand study of representative specimens and by field observations. Prerequisite: Courses 220 and 221 or equivalent.

445. Economic Geology (Non-Metallic Minerals) (2)  
The nature, origin, and accepted refinement methods for the non-metallic and fuel mineral reserves of the world. Special reference to their recovery costs and problems. Classroom work supplemented by hand study of representative specimens and by field observations. Prerequisite: Courses 220 and 221 or equivalent.

446. Advanced Geologic Principles (3)  
Graduate-undergraduate seminar in advanced principles of physical and historical geology. Stresses the use of geologic principles in the solving of current field and theoretical problems in geology. (Field trips required.)

491. Geostatistics (3)  
The application of statistical designs to problems in geology. Rationale and assumptions of basic statistical procedures in terms of current research and possible graduate research studies. Prerequisite: Mathematics 320, 410.

541. Studies in Quantitative Geomorphology (3)  
Hydrologic parameters and techniques of landform measurement discussed as tools in the reclassification and refinement of classical geomorphic systems. Field trip required. Prerequisite: Courses 342, 491, or Mathematics 410.

544. Glacial Geology (2) I  
A detailed study of the origin, development, and topographical effects of the Pleistocene Period in North America. Implications are made relative to the influence of the Pleistocene glacial deposits of the North Central states in the United States upon the agricultural and industrial activities. Prerequisite: Course 346 or equivalent.

546. Paleontology (Vertebrate and Invertebrate) (3) II, Summer  
History identification and ecology of past life forms. Plant fossils as well as invertebrate and vertebrate animal forms. Major emphasis placed on the living conditions of vertebrate animal forms. Prerequisite: Course 346 or consent of instructor.
548. **Stratigraphy (3)**
Principles and methods of biostratigraphy and their application to problems of classification and correlation of the sedimentary record.

549. **Advanced Structural Geology (3)**
The origin and the mechanics involved in the formation of various structural features occurring in nature. Source literature, advanced texts, and dynamic models provide the material content of this course. Prerequisite: Courses 342, 346.

551. **Paleomagnetism (3)**
The earth's magnetic field in past geologic time as determined from measurements of remanent magnetism of rocks. Various theories explaining the mechanism of rock magnetism. An extensive study of the literature which pertains to worldwide paleomagnetic studies and their significance. Prerequisite: Courses 342, 346.

552. **Sedimentary Petrology (3)**
The classification and origin of sedimentary rocks based on hand specimen and thin section examination. Source literature and laboratory study of rocks and thin sections as the basis for student reports and oral presentations. Prerequisite: Courses 400, 440.

590. **Field Problems in Geology (3)**
Use of basic field techniques in studying the geology of a selected area. Field trips required. Prerequisite: Course 342 and consent of instructor.

591. **Micropaleontology (3)**
Microscopic fossils useful in solving stratigraphic problems. Prerequisite: Course 246.
Department of Economics

The Department of Economics offers graduate programs leading to the degrees Master of Science in Education and Master of Arts and to the Certificate of Advanced Study.

MASTER OF SCIENCE IN EDUCATION (AREA PROGRAMS)

The Department of Economics cooperates with such other departments as Education, History, Political Science, and Sociology and Anthropology to devise area programs leading to this degree. The actual division of course study is determined by the student with his adviser. A minimum of 16 hours in Economics will be required. Foreign language proficiency is not required, but a qualifying paper must be written.

MASTER OF ARTS

This program is a basic course of study which combines theoretical, historical, and institutional approaches in the major areas and additional breadth through the requirement of a minor. A minor of 8 hours is required. Students are encouraged to minor in one of the Social Sciences, in History, in Business, or in Mathematics, and to include at least one course in statistics. A total of 16 hours in Economics including two courses in theory and the thesis course is required. The additional 8 hours may be taken in fields of the student's choice, in consultation with his adviser. The student must also meet the general University requirement of a comprehensive examination in his final semester. Total for the degree, 32 semester hours.

Comprehensive Examination

All candidates for a master's degree with a major in Economics will be required to complete satisfactorily a written examination and an oral examination.

CERTIFICATE OF ADVANCED STUDY

Students who wish to pursue the sixth-year program leading to the Certificate of Advanced Study with a major in Economics should consult with the Head of the Department of Economics.

Course Offerings

422. Economic History of the United States (3)

The evolution and expansion of American economic institutions and processes from colonial times to the 20th century. Stresses environmental factors, strategic location of raw materials, the impact of functional technology, and the transition to finance capitalism.

463. Comparative Economic Development (3)

Contemporary economies and their development. Particular emphasis on the development of the economies of the Soviet Union, England, China, India, and the United States. In each case economic development is related to the system in existence (viz., communism, welfare state, private enterprise, etc.). Prerequisite: Course 260. Course 363 is desirable but is not required.
464. Public Finance (3)
Local, state, and national tax systems within the total economy; public debt and fiscal policies; public finance and education in Illinois. Prerequisite: Course 261 or consent of instructor.

465. Government and Business (3)
Government in economic life; analysis of why government has undertaken certain activities, especially regulatory, and how regulatory commissions function and evaluation of effectiveness of regulation. Prerequisite: Course 260 or Political Science 140.

466. History of Economic Thought (3)
The ideas of economics as they have been developed through the centuries, and how these ideas are related to the economic conditions of the times. Main emphasis on classical and more recent schools of thought. Prerequisite: Course 261.

467. The Cooperative Movement (2)
Theory of cooperative enterprise; the practice of cooperative techniques in the United States and abroad. Prerequisite: Course 260.

468. International Economics (3)
International payments, international economic theory, contemporary economic nationalism, international investment and currency problems, and the commercial policies of the major nations. Prerequisite: Course 261.

469. Economic Education (3)
In-service contribution to the work of the Illinois Curriculum Program and the Illinois Council on Economic Education. For summer and extension offering.

495. Seminar in Current Problems (2-4)
Issues and policies in government, politics, and economics in their historical and sociological perspectives.

560. Seminar in Money, Income, and Prices (3)
The role of money in the level of income, employment, and prices. Relationship between monetary and fiscal policies. Prerequisite: Consent of instructor.

561. Local Government's Impact on Economic Activity (3)
History and types of local government intervention in economic activity; regulation, assistance, public ownership. Co-ordination of the activities of governmental and quasi-governmental agencies in these areas. An attempt will be made to analyze the effects of local government activities upon local and area growth.

562. Business Cycles (3)
Prosperity-recession-depression-recovery patterns of modern economic society presented against a background of earlier attempts to account for the cyclical character of the economy. Prerequisite: Course 360.

563. Seminar in Modern Economic Systems (3)
The economic systems of the United States, Great Britain, the Soviet Union, Fascist Italy, and Nazi Germany. Stresses the actual operation of the respective economies. Prerequisite: Course 360.

564. Economic Well-Being and Education (3)
Public education as an agency of social control and its effect on long run economic welfare. Specific aspects of consumption, savings, distribution, and production influenced by education are dealt with. Prerequisite: Consent of instructor.

565. Econometrics (3)
Measurement of supply and demand functions, consumption functions, production functions, cost curves, and systems of economic relations. Prerequisite: Course 261 and consent of instructor.

566. Independent Study in Economics (2) I, II
Individually arranged readings for graduate students to complete requirements in Economics and to meet student's needs. May be repeated for additional credit at post-master's level of study. Prerequisite: Course 360 and written consent of Department Head.
567. Seminar in Transportation and Public Utilities (3)
Research in the fields of transportation and public utilities. Emphasis on current problems of the industries. When taken in connection with the Metropolitan Resource Development program, research will be in the area of the problems facing these agencies in metropolitan areas. Prerequisite: Beginning course in Economics or government.

568. Seminar in International Economics (3)
Recent development in the theory of international trade and finance. International factor pricing, trade, and employment, and international economic cooperation. Prerequisite: Consent of instructor.

569. Seminar in Trusts and Monopolies (3)
History of attempts to control large scale enterprise through government regulation. A substantial amount of individual research required. Prerequisite: A beginning course in Economics or government.

570. Thesis (1-6)

671. Seminar in Economic Theory (3)
Individual research in those areas of economic theory that meet the needs of the students. May be repeated once for additional credit at post-master's level of study. Prerequisite: Consent of instructor.

672. Seminar in Economic Growth (3)
An analysis of the causes, mechanisms, and patterns of economic growth, with special emphasis on capital formation. Prerequisite: Consent of instructor.

673. Seminar in the History of Economic Thought (3)
Studies in the development of economic ideas using original source materials. May be repeated once for additional credit at post-master's level of study. Prerequisite: Consent of instructor.

674. Seminar in Labor Economics and Labor Relations (3)
The economics of labor and of labor-management relations. Emphasis upon individual research. May be repeated once for additional credit at post-master's level of study. Prerequisite: Consent of instructor.
Department of Education

The Department of Education offers opportunity for study toward the degree Master of Science in Education (Fifth Year), the Certificate of Advanced Study (Sixth Year), and the degree Doctor of Education.*

The Departments of Education and Accounting jointly offer an area major in School Business Management for the degree Master of Science in Education and the Certificate of Advanced Study.

Students may major in the following areas listed under each degree or certificate.

Master of Science in Education

Elementary Education
Supervision and Curriculum
Supervision of the Reading Program
Guidance and Counseling
Educational Administration
School Business Management
Education as a Field of Study

Certificate of Advanced Study

General Educational Administration
School Business Management
Elementary Education
Supervision and Curriculum
Education as a Field of Study

Doctor of Education

Administrative and Educational Services
  Administration
  Guidance
  Supervision and Curriculum
  Educational Psychology
  Education as a Field of Study
  Elementary Teaching

MASTER OF SCIENCE IN EDUCATION

General Requirements

Education majors working toward the degree Master of Science in Education must satisfy the following general requirements:

(a) Successfully complete Courses 500, 501, 503;
(b) Develop certain proficiencies in one of the major areas listed above under this degree;
(c) Earn 22 semester hours of credit in the Department of Education and 10 semester hours credit outside the Department.

Particular requirements are listed below under each specialized area.

*Procedures and other detailed information about this program are explained in "Graduate Study in Education," 1962. Copies are available at the offices of the Graduate School and Department of Education.
Objectives for Each Area of Specialization

I. Elementary Education. Specialized study of Elementary Education is undertaken for the purpose of guiding the elementary teacher towards mastery of basic research in child development, elementary curriculum, and the guidance of school learning and for the purpose of expanding his knowledge of the various curricular areas and subject matter appropriate for the elementary school.

II. Supervision and Curriculum. The work of this major area is planned to provide the student with information and to develop competence in supervisory techniques, curriculum theory and practice, cooperative planning for improvement of instruction, and evaluation of programs of curriculum improvement. This area is especially appropriate for persons beginning a career in supervision.

III. Supervision of the Reading Program. This program of specialization prepares experienced teachers who intend to work as coordinators of reading instruction in either elementary or secondary schools. Training is provided in diagnosing reading problems and giving remedial treatment to individual pupils.

IV. Guidance and Counseling. This sequence is designed to provide preparation in the theory, techniques, and information needed by the professional guidance worker or other interested educators at the elementary and secondary-school levels. Courses provide opportunity for youth workers, teachers, administrators, or those engaged in specialized school staff services to apply guidance understandings and counseling techniques to the demands of his position. The requirements as set forth by the Office of the Superintendent of Public Instruction in Illinois for recognition of guidance personnel are fully met. One academic year of practical experience in personnel work and/or teaching prior to graduation in this area is required. A background of other work experience is recommended to enhance the student's grasp of vital issues in guidance.

V. Educational Administration. This program is intended for the beginning student of school administration and should be of particular interest to persons who are just entering or about to enter administrative work. The emphasis is on areas of administrative responsibility, analysis of leadership skills, selection of technical and theoretical resources from allied university studies and the experience of educational practitioners. Only persons with teaching or administrative experience should apply for this program.

VI. School Business Management.* This area is designed to prepare persons who are initially entering the work of managing the business affairs of a school system. A student in this program can expect to devote about one-half of his course time in the study of education and business respectively. Only persons with teaching or administrative experience should apply for this program.

VII. Education as a Field of Study. This area is intended for the college graduate who is generally interested in increasing his competencies in the field of professional education. Candidates may elect this sequence as a means of obtaining a general background in education.

*This area of specialization is also listed under Business Administration on page 65.
Persons electing this area are not limited to one specific professional goal; however, in order to meet the requirements of the Graduate School, the students must follow a program which insures satisfaction of the certification standards for teaching in the State of Illinois if certification has not already been obtained.

*Area Major.* The possibilities for area majors involving the study of Education and one other university subject are listed on page 32. Area major students may expect to spend approximately one-half of their course time in the two subjects respectively; and they shall have two advisers, one from each of their two major departments. Area majors working in Education must pass the appropriate examinations set forth by the Education Department before receiving their degrees.

*Field work* under supervision is sometimes required in a given program of study especially when in the adviser's judgment such work is necessary to prepare the student in his chosen specialty.

*Deficiency study* is required in cases in which the student's background is limited with reference to his chosen specialty.

Students who wish further university preparation for teaching in the secondary school have several options. They may (1) major in a subject for teaching offered by one of several college departments, (2) major in Education as a Field of Study as indicated above in VII, or (3) elect an area major involving Education.

**Certification at the Master's Level**

*Elementary Certification and a Master's Degree*

This program is designed to aid the inexperienced, non-certificated person who wishes to teach in the elementary school and who holds a bachelor's degree in some field other than Elementary Education. It is planned as an in-service sequence to be followed over a period of three successive summers and five or six proximate semesters with minimum modification.

The first summer is intended to give the student an over-all view of the task in the classroom from the standpoint of understanding children and curriculum. (Courses 512 and 511)

Two succeeding semesters each carry 1 semester hour of internship along with Education 581 and Mathematics 502. This gives the beginning teacher a link with the University and aids him in developing a quality program in his classroom.

The second summer carries a 6 semester hour block of courses in specific curricular areas designed to remove undergraduate course deficiencies. Student teaching is also considered as a deficiency and may be removed in the summer student teaching program. The remainder of the plan includes the generally required courses of a master's program in Elementary Education.

**Secondary Certification Sequences**

Persons who hold baccalaureate degrees from accredited institutions without courses in professional education often wish to undertake further college work in order to qualify for secondary teacher certification in Illinois.

The qualified graduate student may seek certification by way of any one of three sequences open to him at Northern. First, he may seek admission to teacher education (see below) and meet minimal Illinois certification
requirements in regard to professional education courses by completing the following requirements: Education 500, Social Foundation of Education; Education 501, Psychological Foundations of Education; Education 510, Methods of Evaluation; Education 521, Seminar in Adolescent Behavior; a special methods course (or Education 424, Methods of Secondary School Teaching); 7 semester hours in student teaching which must be taken for undergraduate credit.

Second, the student may seek fulfillment of his professional education certification requirements by including the necessary courses in his master's degree program in Education as a Field of Study. However, student teaching cannot be taken for graduate credit.

Third, the fifth-year secondary teaching internship offers the promising young man or woman an unusual opportunity. The internship program calls for (1) careful screening of candidates through inspection of credentials, testing, and interviews by University staff and hiring school administrators; (2) continuing supervision throughout the teaching internship by personnel from the hiring school and the University; and (3) a combination of internship teaching, seminars, course work, and individual study. The program consists of four phases. Phase I, which is taken during the first summer, is blocked with professional education courses. This concentration of professional course work qualifies the candidate for a provisional certificate which permits him to teach during the ensuing internship year under contract. Phase II consists of the two semesters during which the intern teaches a three-fifths load at three-fifths base pay on a full day schedule. During the first semester the intern attends an on-campus Saturday morning seminar in secondary education; during the second semester he will attend an evening seminar on adolescent behavior. In Phase III, the second full summer session, the candidate completes the professional education requirements and strengthens his teaching field through graduate level course work. Completion of this phase should result in full secondary certification in Illinois, permitting full employment as a regular teacher. Phase IV consists of finishing course work, completing the qualifying paper required for the Master of Science in Education degree at Northern, and meeting the required levels on the comprehensive examinations for the degree. Completing this final phase may permit the candidate to earn the Master of Science in Education in two full summer terms, two internship teaching semesters, and a third semester of part-time Evening College work. The internship program at Northern Illinois University has the approval and cooperation of the Certification Division of the Illinois State Department of Public Instruction and of the North Central Association.

All three of the above sequences are based on the assumption that the individual student enrolled has completed a subject matter major and minor which are marketable as teaching fields and that he has met certification requirements in general education.

Application for Admission to Teacher Education By Graduate Students

Each graduate student seeking certification (other than those pursuing the Master of Science in Education as a Field of Study) must make formal application for admission to teacher education prior to completing his seventh semester hour of professional education on forms to be obtained and filed in the Office of the Graduate Dean. The decision as to a candi-
date's admission or rejection shall rest with a committee composed of his adviser, the head of the major department involved, and the Director of Student Teaching. Appeals may be made to the Dean of the College of Education or to a college appeal board. Following his admission to teacher education, a plan for a program of professional study will be drawn up. An admission card marked "Graduate, Special" will be issued to the candidate to permit further enrollment in professional education courses and in student teaching. For admission to student teaching, the student must possess a grade point average of 3 (or "B") for courses taken here as a graduate student. He must also have a major and a minor for which there are teaching assignments in the public schools. No graduate of a college or university who has been rejected for admission to a teacher education program at the undergraduate level will be admitted to teacher education at the graduate level. Appeals may be made to the Dean of the College of Education after earlier deficiencies have been removed. No student will be recommended by the institution for certification who has not met the above admission requirements and those of an approved professional curriculum.

CERTIFICATE OF ADVANCED STUDY

General Requirements

A candidate for this certificate must:

1. Apply to the Dean of the Graduate School for admission to the Graduate School and the C.A.S. program.
2. File completed application forms with the Department of Education no later than registration day of the term marking formal admission to the program.
3. Work with his interim adviser in planning work for the first semester.
4. Take screening tests during his first semester, or earlier.
5. Arrange an interview with the chairman of his advisory committee after receiving notification of acceptance by the Departmental Admissions Committee.
6. Confer with his advisory committee to plan a program of study. (Quad­ruplicate copies of the program shall be prepared.)

In addition, other required procedures for sixth-year programs as indicated on pp. 47-50 are to be followed.

Specific Requirements for Each CAS Area of Specialization

I. General Educational Administration. This area is designed to prepare qualified graduate students for various administrative positions in school systems. It emphasizes the technical and specialized aspects of administration. In addition, it includes studies intended to refine the student's competency to deal with more general aspects of educational theory.

Candidates for this area must have a minimum of two years of teaching experience and two years of acceptable and successful administrative experience or satisfy the absence of the latter with internship experience. (See Course 695A.)

Candidates who do not have a master's degree in the area of educational administration must take Courses 533, 534, and 551 (or approved equivalents).
Full-time study for one term or semester is required. This requirement may be satisfied by enrolling for an eleven-week summer term for twelve semester hours.

II. School Business Management.* This area is designed to afford additional and advanced technical study for persons who are serving as school business managers. The program offers both technical and general theoretical study related to work of school management in school systems of medium and large sizes.

Candidates are required to have had a minimum of two years of teaching or administrative experience, to have a master's degree in educational administration or business administration, to present evidence of two years of appropriate and successful supervisory experience or to satisfy this deficiency through internship (Course 695A), and satisfy the residence requirement by enrolling for at least 12 semester hours in one semester or in an eleven week summer session.

III. Elementary Education. This area is designed for experienced elementary teachers and other educators who are interested in further study of elementary education. Emphasis is on research approaches to the improvement of elementary education.

Candidates must have a minimum of two years of successful teaching experience and a master's and/or bachelor's degree in this field. Candidates having both degrees in other areas must enroll for Courses 514-515 prior to admission to candidacy in this area.

IV. Supervision and Curriculum. This area is designed for students who wish to continue study in supervision and curriculum with emphasis on their relationship to the behavioral sciences, school community relations, personnel management, and leadership skills pertaining to the curriculum. In addition, the student works on more advanced educational theory of a general nature.

Candidates in this area must have a minimum of two years of successful classroom teaching experience and a master's degree in supervision and curriculum. (Candidates lacking this degree must take Courses 533, 534, and 551 or approved equivalents. Individual consideration will be given to candidates with master's degrees in fields other than Education for the purpose of planning appropriate study to satisfy professional deficiencies.)

V. Education as a Field of Study. This area is designed for those students who are interested in increasing general competency in professional education. Its primary purpose is to serve the needs of persons desiring to increase their effectiveness as classroom teachers or those who plan to enter the field of teacher education.

A candidate must have a minimum of two years of successful teaching experience in secondary schools prior to admission to the sixth-year program. His program must include Courses 602, 603, and 523. Other courses are to be determined through conference with the appointed committee in terms of the candidate's background, interests, and needs. A candidate who has not had Courses 500, 501, and 560 or their equivalents will be required to complete them in addition to the foregoing course requirements.

*This program is also listed under Business Administration. See page 65.
DOCTOR OF EDUCATION

General Requirements

The degree Doctor of Education, the highest professional degree offered by the Graduate School through the Department of Education, is awarded to those students who demonstrate superior qualities and attainment during their period of study and give clear evidence of exceptional promise in their field.

This degree is a professional degree intended to prepare for two services: (1) Administrative and Educational Services for those who will serve as administrators or service personnel and (2) Education as a Field of Study for those who wish to continue advanced study for the purpose of becoming superior teachers or teacher educators. Within the first type of service, an area of emphasis may be selected from the following four: (a) Administration, (b) Guidance, (c) Supervision and Curriculum, or (d) Educational Psychology. Within the second type only one area of emphasis is offered at the present time: viz., Elementary Teaching as a Field of Study. Both (1) and (2) may serve to prepare individuals for teaching at the college level. Preparation for research responsibilities both as a producer and consumer is an integral part of the program.

A candidate for the doctorate in any of these areas is required to present evidence of a minimum of three years of acceptable professional experience.

The procedures of initial application, in general, are similar to those listed under the master's degree and the C.A.S. In addition, however, the candidate will have additional interviews and take aptitude tests including the Graduate Record Examination as stated elsewhere in this catalog.

To complete the residence requirements, the candidate is expected to fulfill a minimum of one full academic year in residence. This is interpreted to mean two consecutive regular terms, exclusive of summer terms. Residence credit is credit earned on the campus at DeKalb and may not be satisfied by transfer or extension credit.

All general requirements and procedures referring to admission, thesis, final examination, and graduation as set forth by the Graduate School are to be satisfied.

The Department of Education requires the equivalent of at least three years of full-time academic work which includes a minimum of 90 semester hours of graduate work beyond the bachelor's degree in addition to the dissertation. The 90 hours will be distributed as follows:

1. A 38 semester hour core of courses is required of all candidates.* This core includes courses in foundations of education, curriculum, educational psychology, educational administration, higher education, guidance, and research methodology.
2. A minimum of 15 hours outside the field of professional education.
3. A minimum of 12 hours in cognate fields and/or professional education.
4. A minimum of 12 hours in the area of emphasis.

The dissertation is to be based upon original scientific or scholarly work, or it may be related to a field project of highly creative quality.

*Students should consult the handbook "Graduate Study in Education," 1962, for further details. Copies are available at the offices of the Department of Education and the Graduate School.
Students must participate in a research seminar before undertaking their thesis problems.

**Preliminary Examinations.** Written preliminary examinations covering both the general core and the area of concentration will be scheduled and administered at least twice each year. A graduate student will be eligible to take these examinations, with the permission of his adviser, if he has completed at least two-thirds of his studies including the Research Techniques core. Dates on which application for the examination can be made will be announced by the Department or they will appear in the *Graduate Catalog*. These examinations, of which there will be at least three, will encompass major areas of professional knowledge. Any student who fails in these may, with the recommendation of his committee, be granted the opportunity to take a second examination. The second examination, however, will be final.

**Final Examinations.** A final oral examination related to the dissertation is required and is conducted with reference to the general requirements of the Graduate School.

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### Course Offerings

**400. Early Childhood Education (3) I, II**

The school program for children ages three to seven. Planning the learning environment, developing learning activities, organizing the school day, interpreting children's growth to parents, exploring community resources. Special help for each student in planning for individual classroom situations.

**424. Methods and Materials in the Secondary School (3) Summer**

Modern principles of teaching and learning in relation to the guidance of learning activities in the high school class. Prerequisite: Consent of Department Head.

**430. Utilization of Audio-Visual Materials (3) I, II**

Selection, evaluation, and use of various audio-visual materials and techniques. Provides understanding of the operation and maintenance of equipment.

**431. Workshop in Audio-Visual Education (2-4)**

Content determined by experience and needs of enrollees. Emphasis may be on the utilization, construction, or selection of materials or equipment; administration of audiovisual programs and communications. Prerequisite: Consent of instructor.

**438. History of American Education (3) I, II**

Education in relation to the main currents of American history. A survey of educational issues and practices in the United States from early colonial days to the present time. Satisfies the State requirement for a course in American public education.

**444. Workshop in Kindergarten Education (3)**

Study of materials and procedures for kindergarten, including play materials, science experiences, music activities, art materials, literature, and games. Curriculum and program planning. Provision for individual differences within the program.

**466. Diagnosis and Treatment of Reading Difficulties (3) I, II**

Causes of reading difficulties, their diagnosis and correction. Current reading tests.

**482. The Teaching of Reading in the High School (3) I, Summer**

Nature and organization of the junior and senior high school reading programs. Ways of increasing basic reading competencies. The teaching of reading in the various content fields as well as the improvement of interests and tastes.

**500. Social Foundations of Education (3) I, II, Summer**

Social forces influencing American education; basic educational traditions as reflections of American culture; the school and cultural change; educational issues and the sources of conflict in American culture.
501. Psychological Foundations of Education (3) I, II, Summer
The broad fields of psychology as they relate to and provide foundations for educational practice. A constructive analysis of the principal areas, theories, experimentation, and conclusions in psychology with attention focused on such topics as motivation, intelligence, learning, personality, and emotions.

502. The Teaching of Arithmetic in the Elementary School (3) II
(Also listed as Mathematics 502)
Consideration of the implications of research for methods of teaching, and the selection and arrangement of concepts and materials. Prerequisite: Mathematics 402 or equivalent.

503. Master's Qualifying Paper (1-2) I, II, Summer
A seminar and individual instruction to provide necessary research skills and guidance for writing the qualifying paper, followed by library and/or field research under supervision of graduate faculty members. May be repeated to a maximum of 2 semester hours credit.

504. Philosophical Foundations of Education (3) I, II, Summer
Philosophy of education through examination of some of its major traditional systems, e.g., instrumentalism, idealism, realism, Thomism, existentialism.

505. Historical Foundations of Education (3)
The history of education in Western civilization from the classical period to the present with emphasis on leading theories of education and descriptions of school and teacher performance in the light of major problems of a given cultural era. Attention given to research skills in this field.

508. Educational Statistics (3)
Introductory course to provide students with the techniques necessary for understanding, analyzing, and interpreting data. Grouping of data, graphical representation, measures of central tendency, variability, and relationship, the normal distribution, standard score and percentile interpretation, regression equation, and reliability of statistical measures.

509. Supervision and Administration of the Music Program (2) Summer, 1963, and II
(Also listed as Music 509)
Functions and techniques of supervision and administration of the music program. Emphasis on problems in curriculum, equipment and materials, budget, schedules, and programs. Techniques for in-service training in music for classroom teachers.

510. Educational Measurement and Evaluation (3) I, II, Summer
Modern concepts of evaluation; construction and validation of evaluative instruments; use of standardized tests and scales; and procedures of evaluating relatively intangible outcomes.

511. Understanding and Guiding the Elementary School Child (6) Summer
Advanced child development and the role of the teacher in the daily guidance of children. The practical application of child development principles to specific classroom procedures and to the selection of appropriate curriculum experiences. Valuable for educational leaders as well as classroom teachers. Laboratory experiences and group work within the scheduled class period.

512. The Elementary School Curriculum (2) II
Basic principles in the construction and administration of modern school curricula, the relation of the curriculum to society, and present practices in the schools.

513. Problems in Elementary Education (2)
A seminar requiring individual investigations of problems in elementary education culminating in a research project.

514. Seminar in Elementary Education (3) I, II
The use of theory in the analysis and interpretation of teaching-learning situations, as observed or recorded from elementary classrooms, kindergarten through sixth grade. Particular attention to (1) the identification and use of goals in education and (2) the application of knowledge in the areas of learning, human growth, group behavior, and curriculum. Taken concurrently with Course 515. Prerequisite: Courses 500, 501, 503 or 603, 533.
515. The Teacher in the Elementary School (2) I, II
A practicum in elementary education based on teaching-learning situations. The examination of these situations as they suggest means for the improvement of instruction. Taken concurrently with Course 514. Prerequisite: Courses 500, 501, 503 or 603, 533.

519. Measurement, Evaluation, and Guidance in Music (2) II
(Also listed as Music 519)
Measurement includes standardized tests, classroom or studio marking, auditioning, and adjudication. Evaluation weighs such measures of aptitude in the light of professional and educational criteria. Guidance considers the use of these data in counseling programs in public schools and colleges.

520. Seminar in Research in Child Behavior (3) I
An analysis of research dealing with the nature of child development and the implications of such for the classroom teacher. The areas of emotional, intellectual, and social development.

521. Seminar in Adolescent Behavior (3) I, II
An analysis of research dealing with the nature of adolescence and the implications of such for the classroom teacher.

522. Junior High School Organization and Problems (3)
The development of the junior high school organization and its philosophy; forms of curricula; characteristics of junior high school students. Administrative problems such as program making, co-curricular activities, junior high school physical facilities, role of staff, and junior high school-community relations.

523. Seminar in Secondary Education (3) I, Summer
A seminar concerned with professional and classroom problems of secondary school teachers. Prerequisite: Consent of instructor.

524. Introduction to Comparative Education (3) II, Summer
The major features of education in such leading countries as France, West Germany, India, the Soviet Union, the United Kingdom, and the United States examined with reference to historical, sociological, and political points of view for the purposes of acquiring significant knowledge and understanding the tasks of the researcher in comparative education. Satisfies the State requirement for a course in American public education.

525. Foundations of Music Education (2) I
(Also listed as Music 525)
The historical and philosophical bases of music education. The application of learning theories to problems of music teaching. Required for the M.M. degree with a major in Music Education.

530. The Junior College (3) Summer
The development of the junior college movement; its present status, purposes, functions, organization, and curriculum; and the characteristics of the emerging community college.

533. Curriculum Theory (3) I, II, Summer
The assumptions underlying current curriculum proposals. Curriculum theory will be formulated in order to make decisions about such selected questions as what, how, and who shall be taught and how this teaching may be organized and evaluated.

534. Improvement of Instruction (2) I, Summer
An investigation and analysis of common problems in teaching. The principles which apply at all levels of instruction.

535. Secondary School Curriculum (3) I, Summer
For advanced students who wish to make a thorough study of basic principles in the construction and administration of secondary school curricula, the relation of the curriculum to society, and present practices in secondary schools.

541. The Improvement of Instructional Programs (3) II
Analysis of supervisory functions, methods, and responsibilities of those who assume educational leadership. The process of planning and directing the functions of the educational staff, evaluating physical and human resources toward the improvement of instructional programs, and improvement of in-service programs. Prerequisite: Course 534.
542. Fundamentals of Curriculum Development (3) II
Application of principles and procedures to the development of educational programs in elementary and secondary schools. The analysis of curriculum materials. Prerequisite: Course 533.

543. Problems in Curriculum Development (2)
Students are required to undertake a major curriculum construction project, to be utilized within a school system or published in pamphlet or article form. School systems are encouraged to send teams of students to develop new or revised curricula.

551. School Organization and Administration (3) I, II
A basic course in organization and administration. Develops a philosophy for school administration and understanding of the following areas of school administration: curricula, pupil administration, supervision, public relations, finance, executive efficiency.

553. Problems in School Administration (3) II
A seminar requiring individual investigation of fundamental problems in school administration and school business management culminating in a research paper. Problems based largely on past or anticipated experience of the students. Prerequisite: Courses 551 and 651 or 652 or consent of instructor.

556. School Organization and Administration for Teachers (2)
The development of insight into the role of the teacher in organizational and administrative problems of the school.

559. Seminar—Nature and Theory of Administration (1-3) II
Inquiry into the nature of the school administrative process. Discussion of administration in terms of principles. Research, study, and analysis of the latest thought in the areas of administration. Emphasis on the basic concepts rather than practices. May be repeated to a maximum of 6 semester hours credit. Prerequisite: Consent of instructor.

560. Personnel and Guidance (3) I, II, Summer
Introduction to personnel work in elementary and secondary school. Recognition of needs for guidance, guidance principles, practices, and their application.

561. The Teacher's Role in Personnel Work (2)
The need for personnel work, including guidance, ways of meeting needs of elementary and high school pupils by the classroom or homeroom teacher, or specialized services to which teachers may refer individuals needing help.

562A. Counseling Techniques, Theory and Practice (2) I, II, Summer
An introduction to counseling theory and practice with emphasis on interview techniques. Prerequisite: Course 560.

562B. Counseling Techniques, Theory and Practice (2) I, II
A continuation of Course 562A. The practical aspects of the counseling situation. Cases, tapes, role playing, and analysis of the counseling movement and counselor responses. Prerequisite: Courses 562A, 563, and consent of instructor.

563. Educational and Psychological Measurement (3) I, II, Summer
An introductory course dealing with the essential principles of measurement and basic statistical concepts needed for the understanding and use of tests and other measures in educational personnel work. Statistics as applied to educational personnel work, achievement and special aptitude tests, interest and personality inventories, and other measures. Experience in administering, scoring, and interpreting tests.

564. Techniques in Student Personnel Work (2) I, II, Summer
The use of various techniques such as anecdotes, autobiographies, sociograms, behavior description, voting scales, and case studies. The use of records in counseling. Emphasis on the counseling interview and on testing is found in other courses. Prerequisite: Course 560 (Course 563 recommended).

566. Clinical Problems in Teaching Reading (3) Summer
A practicum providing clinical experience in applying remedial procedures with severely disabled readers. Prerequisite: Course 466 or equivalent.
567. Information in Guidance (3) I, II, Summer
Methods of obtaining, evaluating, and organizing materials of occupational, educational, personal, and social information. The use of these informational materials in the counseling and group guidance processes. Prerequisite: Course 560 or equivalent.

568. Guidance in Elementary Education (2)
Principles and methods and practical problems pertinent to the elementary school. Recognition of early remedial problems in reading and behavior. The use and importance of anecdotal personal data records, parent and teacher interviews, and interpretation for referrals. Planning programs for individual pupils with teachers.

571. Organization and Administration of Guidance Services (2) I
The functions, basic elements, and effective organization of guidance services within the pupil personnel framework. Problems in activating, organizing, and administering guidance services: selection and education of the staff: evaluating the services; utilizing community resources; and developing records. Prerequisite: Course 560.

572. School-Community Relations (3) I, II, Summer
The responsibility of the school to offer leadership and interpret home-school-community relationships. The task of surveying and utilizing community resources, studying promising programs and practices, and evaluating educational criticism.

576. Clinical Diagnosis of Reading Difficulties (3)
A practicum emphasizing case study techniques in the diagnosis of reading problems. The administration of various formal and informal tests and the interpretation of the test results. Making case studies, followed by the preparation of case reports. Prerequisite: Course 466 or equivalent.

580. Seminar in Guidance and Counseling (3) I, II, Summer
Selected problems in guidance and counseling with emphasis on current issues and individual problems. Prerequisite: Minimum of 12 graduate semester hours in guidance and/or consent of instructor.

581. Improving the Teaching of Reading in the Elementary School (3) II
The developmental reading program in the elementary grades. Criteria for a desirable reading program in the elementary school including the individualized reading program.

582. History of European Educational Thought (3) II
Theories of European philosophers of education which have influenced Western civilization. An examination of original writings by Plato, Aristotle, Comenius, Locke, Rousseau, Pestalozzi, Froebel, Herbart.

583. Social Learnings in the Elementary School (1-3)
Principles and procedures in the development of social experiences. Child growth and development, democratic values and processes, actual life situations and common life problems.

584. The Teaching of Science in the Elementary School (1-3)
Techniques used in selecting and providing experiences in elementary school science. The study of equipment and materials suitable for elementary school students.

585. Teaching Language Arts in the Elementary School (1-3) Summer
Trends, materials, principles, and methods in the teaching of language arts in the elementary school.

586. Related Arts in the Elementary School (1-3)
The functions of the arts in the total elementary school program: an analysis of contemporary trends in the teaching of art, industrial arts, home economics, music, dance, and literature.

587. Problems in Audio-Visual Education (3) II
Individual projects and research in selection and utilization of audio-visual materials and equipment; unit costs, evaluation procedures, and setting up and administering an audio-visual program. Prerequisite: Course 430 or consent of instructor.

588. Corrective Reading in the Elementary School (3)
Experiences in applying corrective procedures in teaching the less severe reading disability cases among elementary school children. Supervised laboratory practice, as well as some classroom study. Prerequisite: Course 466 or 581 or equivalent.
589. Corrective Reading in High School (3) Summer
To acquaint qualified students with corrective procedures appropriate for the less severe reading disability cases in secondary schools. An investigation of classroom corrective procedures and the application of these procedures in teaching secondary school students. The use of the more recently developed visual aids used in teaching reading. Prerequisite: Course 466 or 482 or equivalent.

590. Counseling and Guidance Training Institute (9) Summer
A concentrated institute offered to improve the qualifications of (1) personnel engaged in counseling and guidance of students in secondary schools and/or (2) teachers in such schools preparing to engage in such counseling and guidance. Admission to this course is controlled by committee action growing out of prior application bearing the endorsement of the student's immediate superior in his employment as a teacher.

591. Advanced Educational Statistics (2)
Concepts dealing with regression and prediction, significance of the Mean, and significance of the difference between Means, testing experimental hypotheses, analysis of variance, and further methods of correlation. Prerequisite: Course 508 with at least "B."

592. Philosophical Analysis of Educational Thought (3)
Procedures of formal and informal philosophical inquiry explored for the purpose of acquiring facility in using philosophical resources for the criticism, development, and refinement of educational theory. Prerequisite: Course 406 or 504 or consent of instructor.

593. Supervision of Student Teachers (3) Summer
To provide cooperating teachers, administrators, and supervisors with a better understanding of the function of student teaching in the professional education of teachers. Discussion of the basic issues to bring out valuable techniques in supervising, directing, and evaluating the experience of the student teacher. Prerequisite: Consent of instructor.

595B. Internship (TBA) I, II
For those actively engaged in supervisory work. Study under the guidance of the university instructor. Individual observation and conferences and a number of Saturday meetings to consider common problems. Anecdotal records and other materials analyzed and evaluated. Prerequisite: Courses 543 and 593 and consent of the Student Teaching Office.

599. Reading Institute (2-3) Summer
Basic reading problems in the elementary, junior high, and senior high school. Guest instructors and regular staff members. An intensive course for two or three weeks.

601. Advanced Educational Psychology (3) I, II
Detailed analysis of modern learning theories and practices as they relate to education. Further development of major areas of human growth as they relate to the school. A detailed investigation of major research in educational psychology. Prerequisite: Course 501.

602. Methods and Techniques of Research (3) I, Summer
The types, devices, and techniques of educational research, with attention to the needs of both the consumer and producer of research. Guidance in planning for a Certificate of Advanced Study thesis or a Doctor of Education dissertation. Prerequisite: Consent of instructor. (Courses 508 and 563 recommended.)

603. Independent Research (1-3) I, II, Summer
Independent research projects, including thesis work in Education under faculty supervision. Sixth-year student should enroll for 3 semester hours of 603 credit. May be repeated to a maximum of 6 semester hours credit.

605. Experimental Research (3) I, II
To develop an understanding of how to set up experimental research and to conduct an experimental research project. It is recommended that the project be conducted in the student's own teaching situation under the direction of the adviser with the approval of his own school administration. May be repeated to a maximum of 6 semester hours credit. Prerequisite: Sixth-year standing. 3 semester hours of this course are taken co-requisite with Course 611, and 3 semester hours are taken co-requisite with Course 612.

611. Advanced Child Study (3) I, II
The scientific study of individual children and groups of children. Diagnosis of the matrix of the child's environment and application of principles of child development. Co-requisite: Course 605.
612. Practicum in Child Study (3) I, II
For those actively engaged in teaching to employ, under guidance, advanced child study principles and techniques. The student will submit a plan of study and will carry out his study under the direction of the instructor. Co-requisite: Course 605.

616. Elementary Teacher Education (3)
A survey of selected undergraduate programs of preparation which have been designed to educate teachers for the public elementary schools. Intensive analysis of the program at Northern Illinois University involving supervised laboratory experiences. Internship correlative with this course recommended. Prerequisite: Courses 514, 515 or consent of instructor.

617. Curriculum Design in Elementary Education (3)
Interrelationships of various components of a curriculum design. Curricular design as a basis for decision making in constructing an instructional program in elementary education. Prerequisite: Courses 514, 515 or consent of instructor.

618. Professional Writing (1)
Guidance in the preparation of professional manuscripts. Presentation of methodology in treatment of material: analytical, descriptive, scientific, historical. Procedures for submitting for publication. Prerequisite: Courses 514, 515 or consent of instructor.

619. Professional Leadership (3)
Educational leadership as the implementation of social policy. Selected problems of ethical nature which are common to teachers. Emphasis upon current issues. Prerequisite: Courses 514, 515 or consent of instructor.

633. Seminar in American Educational Thought (3) I, Summer
A critical examination of key ideas leading to the unique educational system in America. For advanced students Intensive work with the educational ideas of some leaders in the intellectual history of the United States: Franklin, Jefferson, Mann, Emerson, Whitehead, Dewey, and others.

651. The Elementary School Principal (2) I, II, Summer
The basic performance patterns of the elementary school principal in the organization and administration of the educational process. Prerequisite: Course 551 or administrative experience.

652. The Secondary School Principal (2) I, II, Summer
For junior high and high school administrators. Program construction, staff utilization, pupil records, organizational structures, and plant utilization.

653. Practicum in School Administration (1-12) I, II, Summer
Advanced library research in school buildings, finance, demography, and human relations.

654. School Buildings (2) I, II, Summer
School plant planning, the school plant survey, population and utilization studies, and evaluation of existing plant. Laboratory and field work. Prerequisite: Course 551 or consent of the instructor. This course is also open, with the consent of the instructor, to students who are members of building planning committees.

655. School Finance (2) I, II, Summer
Basic course in educational finance. Theoretical and practical aspects of the various phases of financial administration; foundation programs, cost-quality relationship, taxation, state and Federal participation, and the more prevalent aspects of operational finance. Prerequisite: Course 551 or consent of instructor.

656. School Administration Field Studies (2) I, II, Summer
Methods of administrative planning in the areas of community background, evaluation of buildings, transportation, scheduling, utilization of staff, and financial analysis.

657. School Law (2) I, II, Summer
Basic course in legal theory and practice. Court cases, school codes, and legal practice of the several states as well as an examination of Illinois law and practice. Prerequisite: Course 551 or consent of instructor.

662. Practicum in Guidance (3-6) II
For students majoring in guidance. Practical experience in guidance functions at elementary, secondary, and/or higher educational levels. Prerequisite: Courses 562A, 562B, and consent of instructor.
671. Research Seminar in Educational Psychology (6)
Students will design at least two studies dealing with major problems in educational psychology and carry them through to completion. Background to each study will be a major area of discussion. Prerequisite: Courses 501 and 520 and/or 521.

673. Administration of Staff Personnel (3)
The problems and issues associated with administration and supervision of school personnel. Organization of staff, formal and informal structure, and the school as a social system.

675. Seminar in Higher Education (3) I, Summer
Teaching problems in colleges and universities, including professional schools and community colleges. Course organization, methods, and class management. Educational problems confronting higher education in connection with the anticipated expansion in the number of students who will demand admission. Experiments and proposals looking toward increasing the "productivity" and efficiency of college teachers.

695A. Internship (TBA) I, II, Summer
Work individually or in small groups in a practical school situation under the guidance of a member of the school's administrative staff and the University supervisor. Internships in supervision and curriculum, guidance, school business management, elementary teaching, secondary teaching, and administration. Graduate students in school business management or in any one of the administrative sequences, engaged in full-time study and with no teaching or administrative experience, will be expected to complete the minimum requirements of internship.
Department of English

The Department of English offers graduate programs leading to the degrees Master of Science in Education, Master of Arts, Certificate of Advanced Study, and Doctor of Philosophy.

MASTER OF SCIENCE IN EDUCATION

Students who elect a graduate major in English toward the degree Master of Science in Education will be expected to do approximately two-thirds of their graduate work in courses in the Department of English. The nature and scope of the courses prescribed will be determined by an examination of the individual student's undergraduate academic record and his general background. There are no specific prerequisites for any of the courses in this department.

MASTER OF ARTS

Students who elect a graduate major in English toward the degree Master of Arts must pass a proficiency examination in one of the following languages: French, German, Spanish, Italian, Latin, Greek, or Russian administered by the Department of Foreign Languages. It is recommended that students take all their work in the English Department, but advisers may grant permission for limited study in other closely related fields.

Comprehensive Examination

All candidates for a master's degree with a major in English will be required to complete satisfactorily a written examination on a list of books selected by the Department of English. This list will be available to each student at the beginning of his candidacy and should be used continually in preparation for the examination.

CERTIFICATE OF ADVANCED STUDY

Students who wish to pursue the sixth-year program leading to the Certificate of Advanced Study with a major in English should consult with the Head of the Department of English.

DOCTOR OF PHILOSOPHY

Requirements

1. Admission to the Program. For admission to the program leading to the degree Doctor of Philosophy in English, the student must:
   a. Show evidence of his capability of pursuing doctoral work either by passing with distinction his comprehensive examination for the master's degree at Northern Illinois University or by passing a qualifying examination during his first year of work.
   b. Secure departmental approval of a program of study. The program shall include courses in Old English, Chaucer, Shakespeare, and Milton, unless the student has previously taken such courses at the graduate level. The program shall include at least 6 semester hours of graduate work in each of the following areas
(graduate courses which the student has previously taken in these areas shall count toward fulfilling this requirement):

a. Linguistics
b. Medieval English Literature
c. Renaissance English Literature
d. 17th Century English Literature
e. 18th Century English Literature
f. 19th Century English Literature
g. 20th Century English Literature
h. American Literature to 1855 (3)
i. American Literature, 1855 to the Present (3)

The student shall have the option of electing a minor field consisting of a program of not more than 12 semester hours of closely related courses in any one of the following fields or in some other field approved by the Department:

<table>
<thead>
<tr>
<th>American Studies</th>
<th>Linguistics</th>
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<tbody>
<tr>
<td>Comparative Literature</td>
<td>Philosophy</td>
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<td>Drama</td>
<td>Psychology</td>
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<tr>
<td>Foreign Languages</td>
<td>Political Science</td>
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<tr>
<td>History</td>
<td>Sociology and Anthropology</td>
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2. Admission to Candidacy. For admission to candidacy to the Ph.D. in English, the student must:

a. Demonstrate a satisfactory reading knowledge of two foreign languages, of which at least one shall be a modern language. The choice of languages shall be subject to departmental approval.

b. Secure departmental approval of a dissertation topic and prospectus.

c. Pass written examinations demonstrating his mastery of subjects in the following areas. At least one examination must be taken in each group, plus one optional, for a total of four:

Group A: Linguistics or Old English
   Medieval English Literature
   Renaissance English Literature (through Shakespeare)
   17th Century English Literature

Group B: 18th Century English Literature
   19th Century English Literature
   20th Century English Literature

Group C: American Literature to 1855
   American Literature, 1855 to the Present

3. Dissertation Requirement. The candidate must write a dissertation which shall be an original contribution to literary or linguistic scholarship. The candidate will present an oral defense of his dissertation before his dissertation committee for its final approval. This committee shall consist of three or more members of the graduate faculty of the Department especially qualified in the area of the dissertation, one of whom shall be the dissertation director; it may comprise members from related fields.
**Course Offerings**

NOTE: Graduate students enrolling in "400" courses should secure permission from the instructor. Courses marked with an asterisk (*) may not apply toward the Ph.D. in English.

*400. Creative Writing (3) I*
Practice in developing papers of varying length and character. Conducted informally, much of the time being devoted to conferences and to critical evaluation of papers written by members of the class. Prerequisite: Courses 103 and 104.

*408. Elizabethan Non-Dramatic Literature (3) I*

410. 17th Century English Writers (3) II
Selected works of such representative writers as Jonson, Bacon, Donne, Herrick, Herbert, but not including Dryden and Milton.

411. Neo-Classical English Writers (3) I
Later 17th and early 18th century literature, including the works of such representative writers as Dryden, Addison, Swift, and Pope.

422. Early Romantic Poetry and Prose (2) I
English literature of the Romantic Period, concentrating on such major figures as Wordsworth and Coleridge.

423. Later Romantic Poetry and Prose (2) II
English literature of the Romantic Period, concentrating on such major figures as Byron, Shelley, and Keats.

*450. Great Books: First Series (2) I*
An opportunity for adult students to read and discuss selected writings from the great minds of the past. Discussions are focused on the human problems dealt with in the works of such authors as Plato, Aristotle, Machiavelli, Smith, Tolstoy, and Marx. Emphasis is on straight thinking through careful reading, constructive criticism, and democratic discussion of ideas.

*451. Great Books: Second Series (2) II*
Continuation of Course 450, with a further examination of Plato and Aristotle, and brief inquiries into such thinkers as Sophocles, Lucretius, Hobbes, Swift, Pascal, Rousseau, Kant, and Mill.

*471. Victorian Prose (3) II*
The main currents of 19th century thought as expressed in the writings of Carlyle, Mill, Ruskin, Macaulay, and others whose pronouncements exerted seminal influence.

472. The American Novel (3) I
An intensive study of selected novels by such representative American authors as Cooper, Hawthorne, Melville, Mark Twain, Howells, Henry James, Dreiser, Cather, Lewis, Wolfe, Hemingway, and Faulkner.

*474. Victorian Poetry (2) II*
A survey of English poetry from Tennyson to Hardy, with special emphasis upon Tennyson, Browning, Arnold, and Swinburne. Four periods a week for nine weeks.

475. Modern British Poetry (2) II
Poetry of leading writers such as Hopkins, Hardy, Yeats, Eliot, Auden, and Thomas, from the point of view of its intrinsic interest and its position in modern literary developments.

476. The Continental Novel (3) I or II
Trends in European fiction of the 19th and 20th centuries, including such writers as Tolstoy, Turgenev, Dostoyevski, Flaubert, Zola, Mann, and Proust.

477. Contemporary American Poetry (2)
Close reading of selected texts by such poets as Frost, Cummings, and Stevens. Attention paid to idea, style, and poet's sense of his place in the modern world.
478. Early American Writers (3)
American writers from the beginnings to 1830, stressing such figures as Edwards, Taylor, Franklin, Paine, Irving, Cooper, and Bryant.

*480. The Materials of High School English (2) I, II
The methods, devices, techniques, and curriculum materials useful to the English teacher in the secondary school.

*481. Introduction to Descriptive Grammar (3) II
The sounds, forms, and structures of contemporary English, intended to acquaint the student with some of the techniques and principles of English linguistics. Prerequisite: Course 321 or consent of instructor.

483. Renaissance Literature (3)
A comparative study of works by such Continental figures as Petrarch, DaVinci, Erasmus, Cellini, Michelangelo, Montaigne, and Machiavelli.

485. English Drama to 1642 (3)
Miracle and mystery plays, interludes, imitations of Latin tragedy and comedy, and plays of such writers as Lyly, Greene, Kyd, Marlowe, Jonson, Beaumont and Fletcher.

486. Modern Drama (3) II
Trends in British, Continental, and American drama from Ibsen to the present day as illustrated by representative plays.

*500. The Relationship between Society and Literature (3) Summer
Literature and the society which produces it. The class will develop four or more core units with considerable emphasis on the materials available in the junior high school.

*501. Independent Study and Research (2) I, II
Individual research in problems in English and American language and literature, under the supervision of a designated member of the department. May be repeated to a maximum of 4 semester hours credit. Prerequisite: Consent of Department Head.

502. Literary History of England (2)
A synoptic view of important English literary movements intended to define the characteristics and to explain the roles of the principal literary figures in each; a study of interrelationships among movements.

503. Literary History of America (2)
A synoptic view of important American literary movements intended to define the characteristics and to explain the roles of the principal literary figures in each; a study of the interrelationships among movements.

504. Analysis and Interpretation of Literary Texts (3)
The techniques of close reading. Intensive analysis, interpretation, and assessment of selected critical and imaginative works. Recommended for first-year graduate students.

505. History of Literary Criticism (3)
Analytical, judicial, and interpretative functions of criticism considered in their relationship to creative achievement.

506. History of the English Language (3)
Historical development of the sounds, grammar, and vocabulary of English from the 10th century to the present.

507. Chaucer: A Critical Study of “The Canterbury Tales” (3)

508. Old English (3)
The phonology, morphology, and syntax of Old English. Reading and critical study of selected prose and poetry.

509. “Beowulf” (3)
Reading and critical study of the oldest English epic and related texts.

510. Middle English Literature (3)
Piers Plowman, Gawain and the Green Knight, The Pearl, and selections from Wiclif, Gower, Lydgate, Trevisa, James I, Henryson, and others.

511. Descriptive English Linguistics (3)
Phonemics, morphemics, syntax and graphics of American English. The methods of structural analysis; an introduction to tagmemics and linguistic transformations.
*513. The Romantic Movement in American Literature (3)  I
Such leading 19th century figures as Emerson, Poe, Hawthorne, Lowell, and Melville.

*514. Realism and Naturalism in American Literature (3)  II
Such writers as Whitman, Howells, Twain, James, Crane, Norris, and Dreiser.

*515. American Literature Since 1920 (3)  II
Such figures as Lewis, Anderson, Cather, Wolfe, Hemingway, and Faulkner.

516. 19th Century American Writers (3-9)
A comparative study of two major 19th century American writers such as Hawthorne and Melville, Whitman and Dickinson, Mark Twain and Henry James. May be repeated with consent of instructor.

517. 20th Century American Writers (3-9)
A comparative study of two major 20th century American writers such as O'Neill and Arthur Miller, Hemingway and Faulkner, Frost and Stevens. May be repeated with consent of instructor.

520. Chaucer: "Troilus and Criseyde" and Minor Poems (3)
Critical study of Troilus and Criseyde and selected poems, excluding the Canterbury Tales.

*521. Grammar of Modern English (3)
For elementary and high school teachers wishing to develop an understanding of the grammar of English. Recent trends in grammar and composition. Not open to English majors except with consent of Department Head.

558. English Drama from 1600 to 1642 (3)
The plays of such writers as Chapman, Jonson, Beaumont and Fletcher, and Webster.

561. Milton (3)
Milton's prose and poetry, with emphasis on Paradise Lost.

562. Spenser (3)
Detailed readings of Spenser's principal works, with emphasis on The Faerie Queene.

563. Later 18th Century English Literature (3)
Poetry and prose, including such writers as Johnson, Boswell, Goldsmith, Gray, Sterne, and Walpole.

570. The 19th Century English Novel (3)  I
Concentration on such major figures as Austen, Dickens, Thackeray, Eliot, and Trollope.

571. Victorian Prose (3)
Mill, Carlyle, Ruskin, Pater, and others.

572. Coleridge and Wordsworth (3)  II
The philosophy of composition and the practice of these poets, together with revelatory memoirs of the period.

573. Shelley and Keats (3)
Shelley as a proponent of political and social reform, with attention to critical opinion regarding this poet. Classical, as well as romantic, elements in Keats.

575. Studies in Modern Poetry (2)
Intensive readings of selected texts in modern British poetry.

576. Studies in the Modern Novel (3)  II
Intensive reading in selected texts.

578. Comparative Medieval Literature (3)
The epic and romantic traditions in Europe, studied through such works as Chanson de Roland, Roman de la Rose, Vita Nuova, Aucassin and Nicolet, Reynard the Fox, Tristan and Isolde, Parzival, Provencal lyrics, and the legendary cycles.

580. Studies in Shakespeare: Early Works (3)
Shakespeare's development, studied through selected works up to 1600, including the early comedies, tragedies, chronicle plays, and poems.

581. Studies in Shakespeare: Later Works (3)
Shakespeare's development, studied from 1600 to the end of his career, including the major tragedies, problem comedies, later historical and romantic plays.
584. Restoration Drama (3)
The heroic drama, Restoration comedy and farce, classical tragedy, the ballad opera, and the beginnings of middle class theatre.

586. Trends in 20th Century Drama (3)
An analysis of representative plays of dramatists from Shaw to T. S. Eliot, showing trends in naturalism, realism, romanticism, symbolism, and expressionism. Special attention given to poetic drama.

587. Modern British and Irish Writers (3-9)
Comparative studies of such writers as Yeats and Eliot, Joyce and Woolf, and Shaw and O'Casey. May be repeated with consent of instructor.

601. Doctoral Research and Dissertation (2-15)
May be repeated for additional credit.

602. Directed Readings in English (2) I, II
A program of library reading and research designed to enable the student to fill in gaps in his previous English studies. The student will be assigned to a supervising instructor in the appropriate field. Periodic quizzes and papers. May be repeated to a maximum of 6 semester hours credit. Prerequisite: Consent of Department Head

603. Bibliography and Methods of Research (2)
To acquaint the graduate student with bibliographical resources and research methods. Required of all master's and Ph.D. candidates.

604. Problems in the Teaching of College Composition (2)
Functional grammar as an aid to writing; reading and discussion as motivation for writing; organization and presentation of material; the research paper; grading standards.

605. Problems in the Teaching of Literature in College (2)
Methods of approach (critical, historical, and biographical); technical problems connected with assignments, class discussion, the lecture, supplementary reading, reports, testing.

606. Seminar in English Linguistics (3)
Selected problems involving the historical, comparative, normative or descriptive study of the various periods and dialects of the English language from the earliest records to the present day.

610. Seminar in Medieval English Literature (3)
A detailed examination of two or three medieval texts, excluding Chaucer.

611. Seminar in Renaissance English Literature (3)
Close analysis of the development of non-dramatic poetry and prose of the period, excluding Spenser, Shakespeare, and Milton.

612. Seminar in 17th Century English Literature (3)
A detailed examination of the work of two or three major writers of the period from Donne to Cowley, excluding Milton.

613. Seminar in 18th Century English Literature (3)
A detailed examination of the work of two or three major writers of the period from Dryden to Johnson.

614. Seminar in 19th Century English Literature (3)
A detailed examination of the work of two or three major writers of the period.

620. Seminar in the Modern Novel (3)
An intensive study of two or three modern novelists.

621. Seminar in Contemporary Literature (3)
Intensive study of dominant movements in recent American or English literature.

650. Seminar in 17th and 18th Century American Literature (3)
An examination of dominant movements in the thought and writing of Colonial and Early National America.

651. Seminar in the Romantic Movement in America (3)
An intensive study of two or three writers of early and mid-19th century America.

652. Seminar in Modern American Literature (3)
Selected figures from late 19th and 20th century American literature.
Department of Foreign Languages

Though a graduate major in Foreign Languages is not offered, properly qualified students may carry the following courses for graduate credit. It is advisable, however, for the student to consult with the instructor of the class before enrollment.

Course Offerings

<table>
<thead>
<tr>
<th><strong>FRENCH</strong></th>
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<tbody>
<tr>
<td><strong>405-406. French IV (18th Century Literature) (4)-(4)</strong> I, II</td>
</tr>
<tr>
<td>A survey of French literature of the 18th century, conducted in French, with work in advanced composition and conversation. Prerequisite: Course 304 or consent of instructor.</td>
</tr>
<tr>
<td><strong>410. Moliere (4)</strong></td>
</tr>
<tr>
<td>An intensive study of Moliere and the theory of comedy, conducted entirely in French. Prerequisite: Courses 303-304 or special permission.</td>
</tr>
<tr>
<td><strong>411-412. French IV (19th Century Literature) (4)-(4)</strong> I, II</td>
</tr>
<tr>
<td>A survey of French literature of the 19th century, conducted in French, with work in advanced composition and conversation. Prerequisite: Course 304 or consent of instructor.</td>
</tr>
<tr>
<td><strong>421. Early French Literature (4)</strong> I, II</td>
</tr>
<tr>
<td>A survey of early French literature with special emphasis on the authors of the 16th century, conducted in French, with work in advanced composition. Prerequisite: Course 304 or consent of instructor.</td>
</tr>
<tr>
<td><strong>425-426. 20th Century French Literature (4)-(4)</strong> I, II</td>
</tr>
<tr>
<td>French writers of the 20th century, conducted in French, with work in advanced composition and conversation. Prerequisite: Course 304 or consent of instructor.</td>
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<tr>
<th><strong>GERMAN</strong></th>
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<tbody>
<tr>
<td><strong>451-452. German IV (19th Century Literature) (4)-(4)</strong> I, II</td>
</tr>
<tr>
<td>A survey of 19th century literature, conducted in German, with work in composition and conversation. Prerequisite: Course 352 or consent of instructor.</td>
</tr>
<tr>
<td><strong>453-454. German IV (Early German Literature) (4)-(4)</strong> I, II</td>
</tr>
<tr>
<td>A survey of German literature before the 18th century, conducted in German with work in composition and conversation. Prerequisite: Course 352 or consent of instructor.</td>
</tr>
<tr>
<td><strong>455-456. German IV (18th Century Literature) (4)-(4)</strong> I, II</td>
</tr>
<tr>
<td>A survey of 18th century literature, conducted in German, with work in composition and conversation. Prerequisite: Course 352 or consent of instructor.</td>
</tr>
<tr>
<td><strong>457-458. 20th Century Literature (4)-(4)</strong></td>
</tr>
<tr>
<td>A survey of 20th century literature, conducted in German, with work in composition and conversation. Prerequisite: Course 352 or consent of instructor.</td>
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<tr>
<th><strong>LATIN</strong></th>
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<tr>
<td><strong>431-432. Latin IV (4)-(4)</strong></td>
</tr>
<tr>
<td>Readings from Tacitus. Survey of Roman historians. Prerequisite: Course 232 or equivalent.</td>
</tr>
<tr>
<td><strong>433. Latin IV (4)</strong></td>
</tr>
<tr>
<td>Cicero. Readings from his works (letters, speeches, philosophical writings). Prerequisite: Course 232 or equivalent.</td>
</tr>
<tr>
<td><strong>434. Latin IV (4)</strong></td>
</tr>
<tr>
<td>Readings from Roman poets (e.g., Ovid, Vergil, Horace, Juvenal). Prerequisite: Course 232 or equivalent.</td>
</tr>
</tbody>
</table>
435. Latin IV (4)  
Readings from Roman playwrights (e.g., Plautus, Terence). Prerequisite: Course 232 or equivalent.

436. Latin IV (4)  
Readings from medieval and modern Latin authors (e.g., Einhard, St. Thomas Aquinas, Grotius) and discussion of their work. Prerequisite: Course 232 or equivalent.

RUSSIAN

481-482. Russian IV (Pushkin and His Time) (4)-(4)  
I, II  
Pushkin's poetic, dramatic, and historical works and their influence on the literary and social trends of 19th century Russia. A survey of Russian literature from the beginning till Pushkin, conducted in Russian, with work in composition and conversation. Prerequisite: Course 282 or equivalent.

483-484. Russian IV (19th Century Literature) (4)-(4)  
I, II  
A survey of Russian literature of the 19th century, conducted in Russian, with work in advanced composition. Prerequisite: Course 282 or equivalent.

485-486. Russian IV (Soviet Russian Literature) (4)-(4)  
I, II  
A survey of Russian literature of the 20th century, conducted in Russian, with work in advanced composition. Prerequisite: Course 282 or equivalent.

SPANISH

461-462. Spanish IV (“Siglo de Oro,” Drama) (4)-(4)  
I, II  
Spanish dramatic literature of the “Siglo de Oro,” conducted in Spanish with work in composition and conversation. Prerequisite: Course 362 or 364 or consent of instructor.

463-464. Spanish IV (“Siglo de Oro”) (4)-(4)  
Don Quixote (Course 463), the writings of the mystics and other non-dramatic literature (Course 464), conducted in Spanish, with work in composition and conversation. Prerequisite: Course 362 or 364 or consent of instructor.

471-472. Spanish IV (19th Century Literature) (4)-(4)  
I, II  
Spanish literature of the 19th century, conducted in Spanish, with work in composition and conversation. Prerequisite: Course 364 or consent of instructor.

473. The Spanish Novel of the 20th Century (4)  
Special emphasis on Pio Baroja and Perez de Ayala, conducted entirely in Spanish, with work in composition and conversation. Prerequisite: Course 362 or 364 or consent of instructor.

474. Spanish Drama of the 20th Century (4)  
Conducted in Spanish, with work in composition and conversation. Prerequisite: Course 363 or 364 or consent of instructor.

478-479. Spanish IV (Spanish-American Literature) (4)-(4)  
Spanish-American literature, conducted in Spanish, with work in composition and conversation. Prerequisite: Course 362 or 364 or consent of instructor.

GENERAL

490. Teaching Practices in the Foreign Languages (2-8)  
The content and focus may vary with each offering. The problems of teaching foreign languages at the elementary, secondary, or junior college and college levels. The normal credit for the course when offered during a school semester will be 2 semester hours. When the work is offered on an intensive basis, such as a summer workshop, the course will carry 1 semester hour credit a week. Prerequisite: The basic minimum requirement is two years of a foreign language in college. Other stipulations may apply, depending upon the content and focus of each offering.

499. Independent Study in a Foreign Language (2-4)  
Individually arranged programs for graduate students; designed to meet special needs. Prerequisite: Advanced standing in that language and consent of the Foreign Language Department.
Department of History

The Department of History offers three degrees and a certificate at the graduate level: Master of Arts, Master of Science in Education, Doctor of Philosophy, and the Certificate of Advanced Study. These may be sought by persons wishing to enlarge their knowledge and understanding of human experience, past and present. This goal may be attained by historical research and investigation as well as by study in advanced history courses. Specifically, graduate work in History may be undertaken by those persons who desire to improve their competence or to enter upon careers in teaching or administration (in the public schools or in institutions of higher learning), branches of state and Federal government, the arts, literature, journalism, or law. Any individual with a grade-point average of 2.5 or better in the last two years of undergraduate work will be permitted to engage in graduate study as outlined below. The student who has not had much previous work in history may be required to enroll in one or more undergraduate courses to make up deficiencies.

Graduate courses in History are principally of three types: advanced undergraduate courses taken for graduate credit in which lecture and discussion predominate; seminars in which the student prepares papers having to do with a particular historical topic and in the process gains experience in historical methodology and the use of primary and secondary source materials; independent study in which the student, with the help of a member of the History faculty, seeks to acquaint himself through individual reading with the literature of one or more topics or themes. Three to five courses each semester constitute a full load; not more than two seminars should be taken concurrently.

Each entering student must submit his proposed program of study for the approval of the Department’s Graduate Counselor. The Graduate Counselor is available on certain evenings and some Saturday mornings to meet off-campus students. Such students are advised to write or telephone for an appointment before coming to the University. Final written and oral examinations are required for each of the degrees described below. Students are responsible for ascertaining the dates on which application to take these examinations must be filed. They should consult with the Graduate Counselor well in advance of the dates set for language proficiency examinations, submission of theses and qualifying papers, and filing of applications for degree candidacy.

MASTER OF ARTS

The Department offers two programs leading to the Master of Arts degree. The first ("A") is intended primarily for the person who wishes to obtain experience in historical scholarship and who hopes ultimately to study for the Ph.D. The student who elects this program and obtains the degree may, at the Department's discretion, be permitted to study for the doctorate in History at Northern Illinois University without having to pass a qualifying examination, provided he meets other requirements for Ph.D. candidacy. The individual who wishes to teach in a four-year college or university will be well advised to take this degree. The second ("B") is intended chiefly for those persons who wish to acquire as broad a background as possible in graduate course work in History. Additional
study for the student who follows this program would ordinarily include not more than that which leads to the Certificate of Advanced Study.

In both programs, students are expected to complete not less than 24 semester hours of work in History. The remaining hours necessary to fulfill the 32 hours required for the degree may be taken in History or in some related subject, usually in the social sciences or humanities.

A

Of the 24 semester hours required in History, not less than 12 nor more than 18 semester hours may be concentrated in one of the following fields of History: European, American, Russian, Asian, or British. Students who have not had a course in historiography (such as the Department's undergraduate Course 420) must enroll in Course 624, "Philosophies of History." Students who intend to teach history in a college or university may enroll in Course 625, "Teaching History at the College Level."

A thesis is required. It is usually written in the field of concentration, and 6 semester hours credit earned for the thesis may be counted as part of the 12 to 18 hours in the field. The thesis topic should be carefully chosen, and discussion of possible topics should begin as early as possible. In preparing the thesis, the student will be expected to demonstrate his ability to do research in original source material, to evaluate the materials with which he is working, and to organize and present his work in acceptable literary form.

Depending on his field of concentration and thesis topic, the student may be required to demonstrate his reading proficiency in one foreign language, usually French, German, or Russian. Another language may be substituted with the approval of the faculty member supervising the thesis. Several works in French, German, and Russian can be recommended to aid the student in preparing for the examination.

B

Of the 24 semester hours required in History, not less than 9 hours must be concentrated in each of two of the following fields of History: European, American, Russian, Asian, and British. Students who have not had a course in historiography (such as the Department's undergraduate Course 420) must enroll in Course 624, "Philosophies of History." A foreign language proficiency and a thesis are not required, but a qualifying paper is necessary. The paper is usually written in one of the two fields of concentration. Discussion of topics should begin as early as possible. By enrolling in one of the independent study courses, 3 semester hours credit may be obtained for the paper and may be counted as part of the 9 hours in one field of concentration.

MASTER OF SCIENCE IN EDUCATION (AREA PROGRAMS)

The History Department cooperates with other departments, particularly with the Departments of Education, English, Journalism, Economics, Sociology-Anthropology, and Political Science, to devise area programs leading to this degree. The student does not take less than 8 semester hours in History. The actual division of work between departments is, however, determined by the student, the History Department's Graduate
Counselor, and the adviser appointed by the cooperating department. The History Department does not require a foreign language proficiency or a thesis, but a qualifying paper is necessary either in History or in the subject matter of the cooperating department.

CERTIFICATE OF ADVANCED STUDY

The Certificate of Advanced Study in History is designed primarily for those persons who wish to broaden their historical perspective through additional course work. Any student with a master's degree (not necessarily in History) and a graduate record averaging 3.2 or better will be permitted to seek the Certificate. Of the 30 semester hours required for the Certificate, not less than 20 hours must be in History, divided approximately equally between any two of the following fields of History: European, American, Russian, Asian, and British. If the student has the master's degree in History, at least one of the fields chosen for the Certificate must be different from those studied for the master's degree.

Foreign language proficiency is not required, but a research paper is necessary. The student will usually write the paper in one of the two fields of concentration. Discussion of possible topics should begin as early as possible. A total of 3 semester hours credit may be obtained for the paper and may be counted toward one of the fields of concentration by enrollment in an independent study course.

CERTIFICATE OF ADVANCED STUDY
(AREA PROGRAMS)

The History Department cooperates with other departments, particularly Economics, Sociology-Anthropology, and Political Science, to offer an area program leading to the Certificate.

DOCTOR OF PHILOSOPHY

The Ph.D. is the highest mark of intellectual achievement obtainable in the United States in the humanities and social sciences. It has traditionally been a research degree and has been awarded only to those who have met rigorous standards, including the demonstration of excellence in scholarship. By common consent, the Ph.D. is also regarded as the indispensable qualification for college and university teachers. The members of the History Department are concerned that the high ideal of excellence associated with the degree be maintained at Northern Illinois University.

Departmental Requirements

A. Fields of Concentration

Each student shall complete approximately 30 semester hours in one major field and approximately 15 semester hours in each of two minor fields, exclusive of credit allowed for the dissertation. Major and minor fields are listed below. Students majoring in Modern European History must choose one minor in Ancient or Medieval History; students majoring in United States History must choose one minor in British or Modern European History. With the approval of the Department's Graduate Counselor, one minor field may be taken outside the Department.
Major Fields:  
Modern European History  
United States History  

Minor Fields:  
Ancient History  
Medieval History  
Modern European History  
Russian History  
Asian History  
British History  
United States History  
Latin American History  

Further information regarding major and minor fields may be found in the *Graduate Students' Manual* of the History Department.

B. Course Requirements

1. Course 624, "Philosophies of History"
   Designed to acquaint the student with the major works and philosophies of history.

2. A minimum of 12 semester hours credit in History seminars.

C. Language Proficiency

The candidate must pass examinations designed to test his reading proficiency in two foreign languages, usually French and German. With the agreement of the dissertation adviser, another modern or ancient foreign language may be substituted for one of these. The examination will be set by the History Department and graded by the Foreign Language Department; the use of a dictionary is permitted, but passing grades will be given only for literate, idiomatic translations which accurately convey the shades of meaning in the original. One of these language proficiency examinations must be passed before the candidate sits for the Qualifying Examination. The second must be passed before he sits for the Comprehensive Examination.

D. Dissertation

Every candidate for the doctorate must present an acceptable dissertation in his major field. It must be in a form suitable for publication. This study must be based on primary sources, and it must present a substantial new contribution to knowledge. The candidate must make a satisfactory public defense of his dissertation before an examining board appointed by the Dean of the Graduate School; any holder of an earned doctorate, upon invitation of the Dean of the Graduate School, may attend such an examination and shall have the right to ask questions. Examinations may not be scheduled without the written approval of the dissertation adviser and at least one additional member of the graduate faculty appointed by the Dean as reader.

E. Examinations

1. Qualifying Examination. In order to become a departmental candidate for the degree, every student must pass a Qualifying Examination designed to ascertain the student's ability to pursue advanced graduate study in History. Specifically, the student will be examined on 1) his capacity for critical reading; and 2) his knowledge of significant problems and of bibliography in his proposed field of concentration; and 3) his ability to
define and undertake a preliminary investigation of a valid and feasible historical research project which might well serve for a doctoral dissertation. Ordinarily this will be an oral examination conducted by at least two members of the graduate faculty designated by the Department's Graduate Counselor. This examination may be taken at any time after the completion of 15 hours of graduate credit and must be passed before registering for more than 45 hours. Although a student who has successfully completed requirements for the M.A. degree "A" program may claim exemption from the Qualifying Examination, the Chairman of the Department must be satisfied that the student is able to pursue advanced study in History.

2. Comprehensive Examination on Subjects. Subsequent to the Qualifying Examination but prior to submitting the dissertation, every candidate must pass a comprehensive written and oral examination designed to test his knowledge of subject matter in major and minor fields. The questions on the written part of the examination shall be set by an examining committee consisting of the dissertation adviser and two other members of the History Department. The oral part will be conducted by a board appointed by the Dean of the Graduate School and consisting of three members for the major field and two members for the minor fields; the dissertation adviser is the chairman of the examining board. A candidate who fails either the written or the oral part may take that part a second time after the lapse of at least six months; a second failure shall be final. The oral examination may not be taken until the written examination has been passed.

Course Offerings

GENERAL

410. European Seminar (8)  Summer, 1965
In cooperation with the Departments of Economics, Political Science, and Sociology and Anthropology, offered summer 1965 and every third year, a study-tour that includes one month in residence at Oriel College in Oxford; lectures by British scholars on contemporary British life, the Empire and Commonwealth, and Britain's world relations; study trips to places in and near London and a five-day tour of the Southwest of England; a three-week tour of the continent; and about one week crossing the ocean in each direction. Includes advance reading assignments, shipboard lectures, discussions on shipboard returning to America—all under the supervision of two Northern faculty members; and a graduate paper to be prepared by those taking the course for graduate credit after returning from the tour. Specific information concerning costs and fees will be published in a special announcement about one year in advance of the tour. Carries either graduate or undergraduate credit. May be counted as History, Political Science, Economics, or Sociology credit. About ten weeks.

420. Historiography (2)  I, II
The art and craft of history, the development of historical interpretations, and the great historians in their intellectual milieu from the dawn of history through the mid-20th century.

490. Materials and Problems of High School Instruction in the Social Sciences (2)  I, II
Described under Political Science 490. p. 159.

491. Materials and Problems of Elementary School Instruction in the Social Sciences (2)  I, II
Described under Political Science 491. p. 159.
112 HISTORY

526. Independent Study in American or Latin American History (3)
Open to qualified students who wish to work independently in American or Latin American History. Consent of the faculty member with whom the student seeks to study is necessary. May be repeated to a maximum of 9 semester hours credit.

536. Independent Study in European, Russian, Asian, or British History (3)
Open to qualified students who wish to work independently in any of these fields. Consent of the faculty member with whom the student seeks to study is necessary. May be repeated to a maximum of 9 semester hours credit.

538. Thesis (6)
Open only to the student engaged in writing a thesis under Master of Arts "A" program. The student enrolls with the faculty member directing the thesis.

601. Doctoral Research and Dissertation (2-15)
May be repeated for additional credit.

624. Philosophies of History (3)
Designed to acquaint the student with the major works and philosophies of the great historians of the world.

625. Teaching History at the College Level (2)
Lectures and discussions of the problems of university instruction in history.

626. Advanced Independent Study in American or Latin American History (3)
Open to qualified students who wish to undertake advanced work in American or Latin American history. Consent of the faculty member with whom the student seeks to study is necessary. May be repeated to a maximum of 9 semester hours credit.

636. Advanced Independent Study in European, Russian, Asian, or British History (3)
Open to qualified students who wish to undertake advanced work in any of these fields. Consent of the faculty member with whom the student wishes to study is necessary. May be repeated to a maximum of 9 semester hours credit.

ASIAN HISTORY

439. Southeast Asia (3)
Historical introduction to Southeast Asia. Lectures deal with the Hindu, Buddhist, and Islamic religions, cultural backgrounds of Southeast Asian peoples, the centuries of European domination, and 20th century nationalism and communism.

440. Summer Institute in Asian Civilizations (6)
Summer Lectures, readings, addresses by guest speakers, films, and exhibits, designed to acquaint public school teachers and other persons in public life who received little or no formal training in Asian subjects in their university careers with the basic history, the religious and cultural foundations, and the contemporary problems of the major civilizations of Asia. Time will also be devoted to the use of bibliographic and other materials useful to secondary school teachers. Not open to students who have had both Courses 339 and 439.

441. History of Modern India (3)
Ancient India and the foundations of Hindu society, with particular attention to Indian history from the beginning of Mogul rule through the British conquest to the attainment of national independence in 1947.

535. Seminar in Asian History (3)
The subject matter of the seminar will vary according to the background and interests of the students and the instructor but usually will deal with some aspect of the political, economic, or social history of Eastern Asia since c. 1500. May be repeated to a maximum of 6 semester hours credit.
HISTORY 113

BRITISH HISTORY

466. British Constitutional History (3) II
   British political and legal institutions from Anglo-Saxon times to the mid-20th century.

467. History of the Empire and Commonwealth (3) I
   The British Empire and the Commonwealth of Nations from the 16th century to the present.

537. Seminar in Modern British History (3) II, 1963-64
   The seminar will deal with selected problems in the political, economic, and social history of modern Britain. May be repeated to a maximum of 6 semester hours credit.

EUROPEAN HISTORY

430. The Renaissance (3) I
   Renaissance of the 15th and 16th centuries in Italy and elsewhere. Literary and artistic reawakening. Economic, political, scientific, intellectual, and social forces which have determined the character of "modern" history.

431. The Reformation (3) II
   Protestant Reformation, Catholic Reformation, Wars of Religion, concept and practice of "established church," origins of ideas of separation of church and state, and beginnings of modern religious toleration.

432. History of Ideas to 500 A.D. (3) I
   Definition and limitation of the field of intellectual history and its relationship to other fields such as science and philosophy. The big questions about which man has always speculated and an exploration of the effect of ideas on people in the periods of the Primitve and Near Eastern Origins, the Classical and Hellenistic Greeks, the Hebrews, the Romans, and the Early Christians.

433. History of Ideas, 500-1600 A.D. (3) II
   A continuation of Course 432, in the periods of the Early Middle Ages, the High Middle Ages, the Renaissance, and the Reformation.

434. Europe in the Age of the Democratic Revolution, 1750-1815 (3) II
   The origins of modern democratic ideas and institutions are studied in the context of the 18th century Enlightenment, the radical reorganization brought about by the Revolution of 1789-94, the conservative reaction and the consolidation and diffusion of the Revolutionary achievement by Napoleon.

435. 20th Century Europe (3) I, II
   European and world affairs in this century. Origins of the two World Wars, the Great Depression, rise of totalitarian governments, retreat of Europe from Asia and Africa, attempts at international organization.

436. Great Revolutionary Movements of Modern History (3)
   English Revolutions of the 17th century, French and American Revolutions of the 18th century, Russian and Chinese Revolutions of the 20th century, analyzed and compared as an exercise in historical synthesis and interpretation.

437. Revolution and Reaction (3) II
   The ideas and events characterizing the social and political conflicts of the 19th century which gave rise to the ideologies of the 20th century.

438. Imperialism (3) II
   "Imperialism," in ancient as well as in modern times, with particular emphasis on its 20th century forms and on problems raised by it in our times.

461. Diplomatic History of Modern Europe (3) II
   The development of the idea of a balance of power and its consequences, especially since the Congress of Vienna.

462. European Intellectual History, 1600-1815 (3) I
   Key philosophical ideas and the way in which they affected institutional development. Scientific Revolution, Rationalism, Divine Right versus theories of popular government, Deism and Pietism, Pantheism, Mercantilism versus economic liberalism, and Enlightenment theories of Natural Law.
463. European Intellectual History, 1815 to the Present (3)  

464. History of Modern France (3)  
French society, government and culture from the end of the Hundred Years War to the present. The Renaissance, the religious wars and the early consolidation of the monarchy are briefly treated as an introduction to the Age of Louis XIV, the Enlightenment, the Revolution and Napoleon, the Restoration and the development of democracy in the 19th and 20th centuries.

465. History of Germany and Central Europe since 1648 (3)  
The main themes of modern German history, including the age of absolutism, the rise of Prussia, the Napoleonic era, nationalism and unification, power politics, imperialism, two World Wars, National Socialism and its aftermath.

530. Seminar in Ancient History (3)  
Selected problems of European history during the ancient period to 500 A.D. May be repeated to a maximum of 6 semester hours credit.

531. Seminar in Medieval History (3)  
Selected problems of European history during the medieval period, 500-1500 A.D. May be repeated to a maximum of 6 semester hours credit.

532. Seminar in the Renaissance and Reformation (3)  
Selected problems of European history during the Renaissance and Reformation Periods. May be repeated to a maximum of 6 semester hours credit.

534. Seminar in Modern European History (3)  
Selected problems of European history since 1600 A.D. May be repeated to a maximum of 6 semester hours credit.

531. Seminar in Modern European Economic History (3)  
Studies in the development of economic institutions and ideas.

632. Seminar in European Intellectual History (3)  
Selected topics inviting the student to describe and analyze interesting patterns of thought and feeling which have shaped the lives of Europeans from the decay of the Catholic imagination through the new consciousness of Enlightenment, Romanticism, Scientism, and secular social and political ideologies.

HISTORY OF THE AMERICAS

418. Civil War and Reconstruction, 1850-1877 (3)  
The sectional crisis of the 1850's, the Civil War, and the period of political reconstruction; special attention to cultural and social factors involved in the sectional conflict and the war's lasting effects upon national and regional life.

419. Emergence of Modern America, 1877-1917 (3)  
America's urban-industrial transformation, national emergence as an imperial power, and political movements through the era of Populist protest and Progressive reform.

421. The United States since 1917 (3)  
American development from the First World War to the present, with attention to the political alterations and the national role in world affairs which have influenced present policies.

423. American Intellectual and Social History to 1865 (3)  
America's intellectual and social heritage from Western civilization, and the changes in that heritage which entered into the development of an American ideology. Prerequisite: Course 220.

424. American Intellectual and Social History since 1865 (3)  
Traditional American ideas and concepts in relation to the social and intellectual challenges arising from America's transition to a secular, urban-industrial society during the past century. Prerequisite: Course 221.
425. American Culture in the 18th Century (3) II
The 18th century background of some more important aspects of contemporary American culture. Topics for intensive study to be selected by students in consultation with the instructor.

429. History of American Labor from 1787 (3) II
Role of the working class in American history from the Early National Period to the present, with emphasis upon the growth of organized labor, labor problems, and labor's relation to other segments of American society during the 20th century.

450. Diplomatic History of the United States to 1898 (3) I
American diplomacy, the theory and conduct of foreign affairs, and America's world role from colonial backgrounds to the Spanish-American War.

451. Diplomatic History of the United States since 1898 (3) II
The theory and practice of American foreign relations, the United States' emergence as a world power, and the conduct of diplomatic affairs from the Spanish-American War to the Cold War.

520. Seminar in 18th Century America (3) I
Selected problems of American history in the 18th century. May be repeated to a maximum of 6 semester hours credit.

521. Seminar in 19th Century America (3) II
Selected problems of American history in the 19th century. May be repeated to a maximum of 6 semester hours credit.

522. Seminar in 20th Century America (3) II
Selected problems of American history in the 20th century. May be repeated to a maximum of 6 semester hours credit.

523. Seminar in Latin-American History (3)
Selected problems in Latin-American history. May be repeated to a maximum of 6 semester hours credit.

623. Seminar in American Intellectual and Social History (3) I
An intensive examination of ideas and preconceptions in American thought on both the popular and scholarly levels during various periods.

RUSSIAN HISTORY

442. History of Russia in Asia (3)
The Russian Empire in Asia from its origins to the present. Both internal developments and Russia's relations with Asian countries, including relations with the European imperial powers when they are involved, will be treated.

540. Seminar in Russian History (3)
Selected problems in Russian history. May be repeated to a maximum of 6 semester hours credit.
Department of Home Economics

The Department of Home Economics offers graduate programs leading to the degrees Master of Science and Master of Science in Education. The graduate programs offer graduate instruction in the following areas:

1. Marriage and Family Life
2. Child Development—Nursery School Education
3. Food and Nutrition
4. Home Economics Education

A candidate for an advanced degree in Home Economics is expected to have an undergraduate major in Home Economics or a major in a closely related field and a minor in Home Economics. Those who plan to teach must fulfill state certification requirements. Deficiencies in the area of specialization at the undergraduate level will be determined by a committee of graduate staff and must be made up before admission to candidacy.

The graduate student works with an adviser in her major area. Approval of her program is subject to a committee of graduate faculty in the Department.

All candidates for master's degrees are to complete 32 semester hours of credit, write a qualifying paper, and take a final examination. An oral examination may be given upon request of the Department.

All students planning to major in Home Economics should have a conference with the Head of the Department before registering the first time.

MASTER OF SCIENCE

Major in Food and Nutrition

This major increases the student's ability to work as a nutritionist with a promotional organization, as a community nutritionist, as a home economist with a public service company, and as a research assistant in test kitchens.

Candidates for a Master of Science degree with a major in Food and Nutrition are required to elect 20 semester hours in the Department of Home Economics. The 10 additional semester hours should be elected outside the candidate's major field.

Prerequisite to a major in this area is a minimum of 16 semester hours in Chemistry, including General Organic Chemistry, Biochemistry, or Physiological Chemistry.

Required: Courses 504 or its equivalent and 505; Education 508.
Recommended: Courses 428, 429, 500A, 547, 552.
Additional courses suggested: Courses 500 B, C, D.

Major in Marriage and Family Life

Students in this area, besides increasing their teaching proficiency, prepare to work with family agencies.

Students who elect a graduate major in Marriage and Family Life leading to the Master of Science degree must take a minimum of 20 semester hours in the Department of Home Economics. The 10 additional semester hours should be elected outside the major field.
Prerequisites to a major in this area include a total of 18 semester hours in the fields of Marriage and the Family, Child Development, Psychology, and Sociology.

Required: Courses 504 or its equivalent and 505.

Recommended: Courses 500D, 509, 512.

Additional courses suggested: Courses 430, 500C, 538; Education 508; Psychology 465, 515; Sociology 480, 686E.

Area Major in Marriage and Family Life
With Psychology or Sociology

Students in this area major prepare to work with family agencies or organizations relating to this specialization.

With the approval of the cooperating department students may register for an area major which includes:

Marriage and Family Life and Psychology,
Marriage and Family Life and Sociology.

Prerequisites to a major in this area include a total of 18 semester hours in the fields of Marriage and the Family, Child Development, Psychology, and Sociology.

Majors in these areas must elect a minimum of 17 semester hours in Home Economics. Approval of the adviser in the related department is required when an area program is planned.

Required: Courses 504 or its equivalent and 505.

Recommended: Courses 500B, 509, 512.

Additional courses suggested: Courses 430, 500C, 538; Education 508; Psychology 465, 515; Sociology 480, 686E.

Area Major in Child Development—
Nursery School Education and Psychology

Students in this area major prepare to teach in and operate a nursery school and to teach nursery school education at college level.

Prerequisites to this area major include a total of 18 semester hours in the fields of Child Development, Nursery School Education, Marriage and the Family, Psychology, and Education.

Majors in these areas must elect a minimum of 16 semester hours in Home Economics. Approval of the adviser in the related department is required when the area program is planned.

Required: Courses 504 or its equivalent and 505.

Recommended: Courses 430, 500C, 512, 534, 538.

Additional courses suggested in related areas: Courses 509, 552; Education 508, 560; Psychology 465, 515.

MAJOR OF SCIENCE IN EDUCATION

Major in Child Development—Nursery School Education

Students in this area prepare to teach in and operate a nursery school and to teach nursery school education at college level.

Students who elect a graduate major in Child Development—Nursery School Education leading to the Master of Science degree must take a minimum of 20 semester hours in the Department of Home Economics. The 10 additional semester hours should be elected outside the major field.
Prerequisites to a major in this area include a total of 18 semester hours in the fields of Child Development and Nursery School Education, Marriage and the Family, Psychology, and Sociology.

Required: Courses 504 or its equivalent and 505.
Recommended: Courses 430, 500C, 512, 534, 538.
Additional courses suggested in related areas: Courses 509, 552; Education 508, 560; Psychology 465, 515.

Area Major in Child Development—Nursery School Education and Education

Students in this area major prepare to teach in and operate a nursery school and to teach nursery school education at college level.

Prerequisites to this area major include a total of 18 semester hours in the fields of Child Development, Marriage and the Family, Psychology, Sociology, and Education.

Majors in these areas must elect a minimum of 16 semester hours in Home Economics. Approval of the adviser in the related department is required when the area program is planned.

Required: Courses 504 or its equivalent and 505.
Recommended: Courses 430, 500C, 512, 534, 538.
Additional courses suggested in related areas: Courses 509, 552; Education 400, 500, 501, 508, 511, 560, 603; Psychology 465, 515.

Major in Home Economics Education

Students in this area increase their teaching proficiency. They also partially fulfill the requirements for supervision of student teachers.

Students who elect a graduate major in Home Economics Education must take a minimum of 20 semester hours in the Department of Home Economics. These students must elect at least 10 semester hours in graduate courses outside the Department.

Required: Courses 504 or its equivalent and 505, 520, 521, 525.
Recommended: Course 500D.

Area Major in Home Economics Education and Education

Candidates for a Master of Science in Education degree with an area major in Home Economics Education and Education are expected to acquire a general knowledge of:

(1) The history and philosophies of education;
(2) Principles of:
   (a) Curriculum development,
   (b) Educational psychology,
   (c) Evaluation,
   (d) Teaching methods,
   (e) Guidance,
   (f) Research methods in education.

Application of this knowledge to the general field of Home Economics is the responsibility of the Department.
A major in these areas must elect a minimum of 17 semester hours in Home Economics. Approval of the adviser in the related department is required when an area program is planned.

Required: Courses 504 or its equivalent and 505, 520, 521, 525.
Recommended: Course 500D.

Additional courses suggested in related areas: Courses 500A, B, C, 509, 512, 547; Education 501, 508, 560, 562A, 592.

Area Major in Food and Nutrition

This major increases the student's knowledge and proficiency in the field of food and nutrition.

Candidates for a Master of Science in Education degree with an area major in Food and Nutrition and Education or related areas are required to elect 17 semester hours in the Department of Home Economics.

Approval of the adviser in the related department is required when the area program is planned.

Required: Courses 504 or its equivalent and 505.
Recommended: Courses 428, 429, 500A, 547.
Additional courses suggested: Courses 500B, C, D, 552; Education 501, 508, 561, 592.

Course Offerings

410. Nutrition II (2)
Advanced study of nutrition. Special consideration of the influence of such modifying factors as age, sex, and activity of family members. Prerequisite: Course 201.

428. Experimental Foods I (3)
Application of chemical and physical principles to food preparation. Development of experimental attitudes and techniques. Analysis of certain food products. Five periods a week. Prerequisite: Course 410.

429. Experimental Foods II (3)
Continuation of Experimental Foods I. Five periods a week. Prerequisite: Course 428.

430. Participation in the Nursery School (4)
Active participation in the Nursery School with responsibility in directing the children in creative activities. Discussion sessions give opportunity to analyze and evaluate activities and experiences for children in the nursery school. 2 lectures, 4 hours laboratory a week to be arranged. Prerequisite: Course 360 or consent of instructor.

441. Family Relationships (3)
Interpersonal relationships within the family group as influenced by basic human needs, family member roles, values and attitudes in a changing society. Problems unique to different stages of the family life cycle. Family crises.

450. Workshop in Home Economics (1-4)
Advanced techniques and study of various phases of home economics. Nature and length of workshop dependent upon needs of students. Number enrolled limited. Additional problem required for graduate credit.

500. Seminar (2)
Readings and reports in the areas of Home Economics:
A. Food and Nutrition,
B. Marriage and Family Life,
C. Child Development and Nursery School Education,
D. Home Economics Education.
504. Research Methods (3)
Research methods and techniques; characteristics of research; reference materials; tools of research and the research report.

505. Individual Research Problems (1-3)
Independent study under supervision of an adviser. Work on qualifying paper. Prerequisite: Consent of instructor.

509. Marriage and Family Life (3)
An analysis of our Western Family System; its present crisis; some causes and effects. Theories underlying these changes occurring in the family system.

512. Child Development and Nursery School Education (3)
Experimental literature in the field of child development. Knowledge of how children grow and learn during their first five years, the stages through which they pass, and the developmental tasks they accomplish. Opportunity to observe and work with children.

520. Curriculum in Home Economics (3)
An analysis of a curriculum rationale; study of the development of the home economics curriculum; application of rationale to special field of study.

521. Evaluation in Home Economics (3)
Its functions, methods, and application.

525. Supervision of Student Teaching in Home Economics (3)
The responsibilities of the supervisor of the prospective teacher. Problems of orientation, guidance, and evaluation. Professional development and communication involved. Prerequisite: Consent of instructor.

534. Nursery School Administration and Procedure (3)
Students have opportunities to discuss and to take part in the management of the nursery school, to visit several types of schools, and to work with parents. Prerequisite: Consent of instructor.

538. Parent Education (3)
Through contacts—both personal and group—the student experiences ways of working with parents of children ranging in age from pre-school through adolescence. The group dynamics approach is used in planning and carrying out meetings, with opportunity to test a variety of types. The use of mass media to educate parents is demonstrated.

547. Advanced Nutrition (3)
A comprehensive study of major nutrients with emphasis on their metabolisms, inter-relationships, and biochemical importance. Recent research.

552. Infant and Child Nutrition (2)
Nutrition problems in maternal and child feeding.

560. Nutrition Education for Elementary and Secondary School Teachers (3)

601. Problems in Home Economics (1-3)
Independent study, individual problems, action or other research. Prerequisite: Consent of the Head of Department.
Department of Industry and Technology

This department offers programs leading to the degrees Master of Science in Education and Master of Science and to the Certificate of Advanced Study. Special courses and workshops are offered to meet the needs of industries.

MASTER OF SCIENCE IN EDUCATION

Students who elect a graduate major in Industrial Education toward the degree Master of Science in Education must satisfy the following course requirements in this department.

(a) Courses 500, 541, and 670.
(b) Additional semester hours of credit to make a total of 20-22 selected with the consent of the adviser.

MASTER OF SCIENCE

Students who elect a graduate major in this department toward the degree Master of Science must satisfy the following course requirements.

(a) Courses 500 and 670.
(b) Additional semester hours of credit to make a total of 32, 12 of which may be outside the Department. The course requirements will be determined by consultation with the candidate’s adviser.

CERTIFICATE OF ADVANCED STUDY

Since the requirements for the Certificate of Advanced Study are flexible, the student is expected to plan a program in cooperation with a committee assigned by the Head of the Department of Industry and Technology.

Course Offerings

INDUSTRY AND TECHNOLOGY

413. Design in Industrial Arts (3)
   The principles of design and the application of those principles in designing industrial arts projects.

440. Facilities for Industrial Education (3)
   Experiences in planning facilities for industrial education classes. Problems relating to new buildings and equipment, as well as problems of redesign, are studied. Scale layouts are planned and drawn. Prerequisite: Courses 341 and 344.

444. Industrial Training and Evaluation (3)
   The history of employee training, kinds of training, training programs, and instructional methods and evaluation procedures.

447. Occupational Analysis (2)
   Techniques and procedures in analyzing occupations to ascertain their basic elements.

476. Supervision in Industry (2)
   Principles, methods, and techniques for supervision of people in their work. For supervisory personnel and those preparing for such positions.

477. Conference Leading for Industry (2)
   Purposes, advantages, and limitations of the conference method. Instruction in techniques of conference procedure. Experience in planning, leading, and evaluating conferences and in writing summaries.
484. Instructional Aids in Industrial Education (3)
The design, preparation, use, and evaluation of teaching aids with emphasis on applications in industrial arts and other school classes. Intensive study of the various audiovisual devices.

490. Instrumentation (3)
The theory, operation, and care of measuring and inspection instruments used in industry.

491. Industrial Production and Quality Control (3)
The basic processes of custom and serialized manufacture emphasizing techniques used in establishing and maintaining control of the quality of the finished product.

500. Introduction to Graduate Work in Industrial Education (3)
The methods of research available for use by graduate students in Industrial Education; a review of current research studies in this field; and the application of the findings of these studies to the improvement of industrial arts, vocational-industrial, and technical education programs.

501. A-L Technical Problems
An opportunity for the individual student to undertake advanced study of technical problems in various technical areas.

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<td>501A</td>
<td>General (1-3)</td>
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<td>501B</td>
<td>Crafts (1-3)</td>
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<td>501C</td>
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<td>501E</td>
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May be repeated. A limit of 6 semester hours may be earned in any one course. A limit of 6 hours in all courses may be applied toward advanced degrees. Prerequisite: Consent of instructor.

517. Diversified Occupations Program (2)
Problems and procedures in the operation of cooperative part-time programs.

541. History and Philosophy of Industrial Education (3)
The leaders, organizations, and movements that have contributed to the development of industrial education. Philosophies, issues, and problems, relating past to present.

542A. Industrial Arts Activities for Classroom Teachers (3)
Classroom teachers in grades K-6 observe children's activities with tools and materials. Construction of sample projects, teaching aids, and resource units. Not recommended for Industrial Arts majors.

542B. Industrial Arts in Grades K-6 (3)
Organization and administration of industrial arts activities in grades K-6. Classroom observations followed by consideration of purpose, selection of activities, purchase of tools and equipment, and means of starting a program. For administrators and Industrial Arts majors.

544. Content and Methods of Industrial Education (3)
Interest and motivation of learning, skill development, teaching devices, methods and procedures, and shop management. Designed to improve the techniques of teaching industrial education subjects.

545. Curriculum Construction in Industrial Education (2)
The concepts underlying course construction in industrial education. Problems in the selection and organization of instructional materials and course content.

546. Evaluation in Industrial Education (3)
The principles and techniques of evaluation of instruction as applied to courses in industrial education.

566. Problems in Adult Education (3)
History of the adult education movement; learning abilities, educational interests, and needs of adults; problems and procedures in organizing and operating adult education programs; relation of adult education to public school education.

576. Administration and Supervision of Industrial Arts (3)
Administrative and supervisory problems pertaining specifically to industrial arts in the secondary school: curriculum construction and materials; evaluation; laboratory supervision; and administration of supplies, textbooks, and equipment.
584. Trends in Industrial Education (2)
   The evaluation and significance of trends from the viewpoints of theory and practice.

645. Technology in Industrial Arts (3)
   Modern industrial developments such as automation, use of new types of energy, and synthetic materials. Application to teaching industrial arts in high schools.

647. Occupational Surveys (3)
   Problems, methods, and procedures involved in planning, organizing, and conducting occupational surveys in local communities and labor market areas.

658. Seminar in Industrial Education (2)
   Individual and group problems related to the teaching of industrial education.

670. Individual Problems in Industrial Education (1-3)
   Open to qualified students who wish to do individual research in Industrial Education. The qualifying paper or thesis should be written in this course. May be repeated. A limit of 6 semester hours may be earned toward advanced degrees. Prerequisite: Consent of instructor.

676. Programs and Organization of Industrial Education (3)
   The philosophy, objectives, organization, administration, and significant literature for vocational-industrial all-day, part-time, and evening programs, including apprenticeship and vocational rehabilitation. Special attention given to legislation and standards for state and Federal aid to local vocational-industrial and technical programs.

690. Industrial Education for the In-Service Teacher (3)
   Problems of in-service education that need to be considered in upgrading programs of industrial education. Special emphasis given to individual problems.

SAFETY AND DRIVER EDUCATION

For all major programs, including Industrial Education, these courses may be taken as elective hours outside the major department.

485. Workshop in Driver Education (2)
   The principles of traffic engineering, traffic enforcement, and the understanding of legislation affecting driver education; the development of course materials, teaching aids, etc.; and the problems of administering courses in driver education. Prerequisite: Course 385 or other approved driver education courses.

486. Problems in Safety Education (2)
   Philosophy and practices in safety education. Organization and methods used in safety programs. Research and reporting a study.

487. Industrial Safety (3)
   The philosophy and principles of industrial safety and related accident prevention

488. School Safety Programs (3)
   Organization of school safety programs. Planning, administering, and supervising safety programs in the schools.

585. Individual Problems in Safety Education (1-3)
   Opportunity for individual study and research under direction of the instructor. Student will choose a problem in the area of safety education. Prerequisite: Consent of adviser and instructor.
A Master of Arts program in Journalism is not yet complete; however, properly qualified students may take the following courses for graduate credit in consultation with the Department Head.

### Course Offerings

#### 400. History of Journalism (3) I
- Development of newspapers and periodicals from beginnings in Europe through the emergence of modern journalism. Current world news gathering agencies.

#### 435. Publicity Methods (3) I, II
- For students who do not plan to become professional journalists, but desire an introduction to writing publicity releases for newspapers and periodicals about their specialized fields. Open to all students except Journalism majors.

#### 450. School Publications (1-3) II, Summer
- For high school and junior college journalism teachers and school publications directors. Instruction in technical skills, staff organization, and production problems for newspaper and yearbook advisers.

#### 451. Teaching Journalism (2) II, Summer
- Teaching methods of journalism in secondary schools and junior colleges; courses of study, organization, bibliography; use of journalism courses for school publication production.

#### 460. Law of the Press (2) II
- Legal regulations, libel laws, and restrictions on the press, publishing, radio, and television. Required of all majors except Journalism-Education majors.

#### 470. The Industrial Press (3) I
- Practical work in planning, editing, and producing specialized publications, including reporting, copywriting, picture editing, advertising layout, and business management.

#### 490. Readings in Journalism (2) II
- A selected review of journalism literature including books, research studies, periodicals. Open to students of senior standing or above.

#### 500. Independent Study (2-4)
- Open to qualified students who wish to do individual advanced work in Journalism or mass communications. Prerequisite: Consent of instructor.

#### 501. Mass Communications Research Methods (1-3)
- Procedures; sources of information; introduction to and use of mass communication research tools; application of research techniques to restricted problems.

#### 520. Seminar in Press Problems (3) I, Summer
- Selected problems in press freedom, federal-local censorship, press privileges, display and suppression of news, and the public's right to know. Also selected problems in influences of the press on social, economic, and political affairs; public opinion; and the formation of thought processes. Course may be repeated once.

#### 550. Press and World Affairs (3) I, II
- International communications problems of the press in international affairs; a detailed study of international news agencies and services; investigation of the foreign press by countries with emphasis on the press under Fascism, Communism, and Democracy; and world censorship.
Department of Library Science

The Department of Library Science offers graduate programs leading to the degrees Master of Science in Education and Master of Arts.

MASTER OF SCIENCE IN EDUCATION

Students who elect an area major in Library Science and Education leading to the degree Master of Science in Education will be expected to do approximately half of their graduate work in courses prescribed by the Department of Library Science. The nature and scope of the courses prescribed will be determined by an examination of the individual student's undergraduate academic record and his general background.

MASTER OF ARTS

In addition to the general admission requirements listed in the graduate catalog, candidates for the M.A. in Library Science must have completed the following undergraduate courses or their equivalents unless exempted by examination:

311. Introd. to Selections of Library Material (3)
312. Introd. to Reference Materials (3)
412. Cataloging and Classification (3)

Graduate Course Requirements

1. The following three courses are required of all students:
   521—Bibliography of the Humanities (3)
   522—Bibliography of the Social Sciences (3)
   524—Bibliography of the Sciences (2)

2. The student must elect one of the following four courses:
   433—The Library in the Modern School (3)
   434—The Public Library as a Service Organization (3)
   515—College and University Libraries (3)
   516—Special Libraries (2)

3. The student must have a reading knowledge of one foreign language.

4. The student must take a minimum of 10 semester hours credit in graduate courses offered by the College of Liberal Arts and Sciences or, where the student's special interests require, other graduate courses. The selection of these courses, with the aid and approval of the student's advisory committee, must be integrated with the student's graduate program in Library Science.

5. The student must take sufficient additional courses in Library Science to bring the total credits to a minimum of 32 semester hours. These courses are to be selected with the help of the advisory committee.

6. Comprehensive examination. The student must complete satisfactorily an oral examination on a list of books selected by the Department of Library Science. This list will be available to each student at the beginning of his candidacy and should be used continuously in preparation for the examination.

7. The student will prepare a qualifying paper to meet the requirements of Course 530.
Course Offerings

411. Introduction to the Functions of Librarianship (3) I, II
Administrative problems of the library: budget, accounting, planning, personnel. General principles of administration for all types of libraries. Students will prepare a semester project applicable to the type of library in which they expect to work.

413. History of Books and Libraries (2) I, II
The role of books and libraries in Western Culture. The invention of printing and the rise of the idea of literary property. Development of the great world libraries to 1840. Open to all students.

414. The American Library Movement (2) I, II
The rise of the American public and school library as part of the 19th century growth of popular education. The continued development in the 20th century of the library: school, public, local, and regional.

415. Library Work with Children and Young People (3) I, II
The objectives and services of library work with children and young people.

418. Reading Interests of Adolescents (2) I, II
Intensive study of principles of selection of materials for the secondary school and for young people's division of public library, with emphasis on literature and biography; study of the reading interests of young people; methods of stimulating and guiding reading.

433. The Library in the Modern School (3) I, II, Summer
Intensive study of administrative and planning problems of the school library: budget, personnel, physical plant. Development of standards. Special emphasis on coordination for library and curriculum and on the library as a laboratory.

434. The Public Library as a Service Organization (3) I, II
The role of the public library in adult education and as information center of the community. Special emphasis on problems of public support, public relations, and community development. Administrative principles and techniques; library surveys and wider areas of service.

500. Workshop (1-3) Summer
Intensive study of problems of the school or public library in the areas of selection, reference, and cataloging. May be repeated to a maximum of 6 semester hours credit.

512. Advanced Cataloging and Classification (3)
Special problems in classification with emphasis on subject headings and on the cataloging of non-book materials. Part of the course will be devoted to a study of the Library of Congress classification.

515. College and University Libraries (3) I, II
A survey of problems in the field: administration, personnel, special collection. Special emphasis on development in cooperative buying and storage, buildings, and service to researchers.

516. Special Libraries (2) I, II
Intensive study of the techniques of selection, cataloging, preparation, and service of materials in specialized libraries. A field trip to the Chicago area will be part of the course.

520. Colloquium (1) I, II
Lectures by University faculty and special guests on problems of librarianship or allied fields. May be repeated for additional credit.

521. Bibliography of the Humanities (3) I, II

522. Bibliography of the Social Sciences (3) I, II
Intensive study of reference materials and the formation of working collections in this field of knowledge. Special emphasis on sources of business information.

524. Bibliography of the Sciences (2) I, II
Intensive study of reference materials, periodicals, and journals as well as popular reading in the field. Special emphasis on the literature, search, and sources of technological information.

530. Special Problems in Librarianship (1-4) I, II
Research in the field of librarianship. Class will meet one day a week, and students will prepare a research paper for varying credit, dependent upon subject and scope.
Department of Management and Finance

The Departments of Accounting, Management and Finance, and Marketing offer the following graduate programs in Business Administration:

- Master of Science in Business Administration
- Master of Science in Education in School Business Management
- Certificate of Advanced Study in Business Administration
- Certificate of Advanced Study in School Business Management

For specific requirements for these degrees, see Business Administration, p. 65.

Course Offerings

MANAGEMENT

411. Business Law I (3)
The law of contracts, agency, negotiable instruments, and related topics. Case materials and problems are used.

412. Business Law II (3)
The significant phases of the law dealing with personal property, bailments, sales, business organizations, and related topics. Problems and case materials are used. Prerequisite: Course 411.

413. Business Law III (3)
A study and review of the basic legal concepts of primary concern to business men, administrators of small businesses, accountants, and other specialists. Special emphasis on Federal and Illinois regulatory laws. Prerequisite: Courses 411, 412.

427. Production Management I (3)
The issues, concepts, and practices in effectively managing production. Emphasis on case analysis. Prerequisite: Course 333 or consent of instructor.

428. Production Management II (2)
Issues and problems in production management at the corporation level; emphasis on specific cases and supporting investigations. Prerequisite: Course 427 or consent of instructor.

429. Manufacturing Applications and Controls (2)
Integration of the characteristics and requirements of process, product, and operation into a total production system. Prerequisite: Course 427 or consent of instructor.

432. Office Management (2)
Application of the principles of management to the planning, organization, actuating, and controlling of office work; problems of office services, methods, standards, and business forms. Prerequisite: Course 333 or equivalent.

433. Personnel Management (3)
Basic principles and procedures relating to personnel departments; job analysis and evaluation; incentives; employment, placement, and training; employee services. Prerequisite: Course 333 or equivalent.

434. Industrial Management (3)
An introductory and survey course in industrial management. Background of modern industrial management, industrial records, industrial administration, location and equipment, efficiency techniques, and production and stock control. Prerequisite: Course 333 or equivalent.

435. Human Factors in Management (3)
An analysis, through readings, case discussion, and research data, of the conceptual framework for understanding the human problems in business. Personal efficiency, problems involving human relations, and morale with respect to interpersonal, intergroup, and organizational relationships.

These two programs are offered jointly with the Department of Education.
436. Wage and Salary Administration (3)
Managerial problems in the determination of a wage structure that will enable the business firm to procure and maintain an efficient work force. Structure and operation of labor markets, determination of the wage level of the firm, job evaluation, wage surveys, and federal and state legislation affecting wages.

437. Small Business Management (3)
The problems of small business relative to personnel, control, finance, marketing, management, and administration in manufacturing, distributive, and service firms.

438. Labor Law (3)
Legal problems arising from activities of labor organization in industrial controversies. Jurisdiction over disputes, remedies available, regulatory labor legislation, management's responsibility under the law, and resulting changes in management's decision-making power.

439. Time and Motion Analysis (2)
Principles and methods of determination of costs by motion analysis and time studies. Principles of motion as affecting the design of product or service; the effective use of human effort as related to the tools and equipment used in industrial and commercial enterprise.

497. Seminar for Executives (1)
The purpose of the seminar is to offer executives the opportunity to broaden their interest in general problems of management as well as to enrich the background of participants. Lectures and discussions on economics, literature, philosophy, art, music, science, history, and world affairs. May be repeated to a maximum of 3 semester hours credit.

503. Introduction to Research (3)
To acquaint the student with research which has been completed in departmental area during recent years. The student will become familiar with the methods, techniques, and procedures of research. The prospectus for the qualifying paper may be developed in cooperation with the director of the paper. Prerequisite: At least 6 semester hours of graduate work, or consent of instructor.

504. Independent Research (1-3)
With the approval of the major adviser, a qualified student may select a topic for independent study and prepare an acceptable research report. Only 3 hours of credit may be allocated to the qualifying paper. May be repeated to a maximum of 6 semester hours credit. Prerequisite: Course 503 or equivalent.

511. Legal Aspects of Business (3)
A general seminar in legal problems affecting business in the areas of contracts, personnel, taxation, property, and government regulation of business.

533. Organization and Management Development (3)
Methods of strengthening an organization, development of management programs and management training, review of performance, determination of management reserves and replacements.

534. Administrative Theory and Practice (3)
Analysis of cases dealing with administrative problems and simulation studies with a thorough review of the literature dealing with managerial problems.

561. Programing Business Data (2)
(Also listed as Accounting 561)
For procedure analysts, auditors, punch card supervisors, managers of finance, and accountants. Business data processing problems, standard coding techniques, and a critical examination of accounting problems associated with electronic data processing. Prerequisite: Course 453 or equivalent.

571. Business Forecasting (2)
An analysis of methods of business forecasting as applied to industrial growth patterns, business conditions, and sales. Prerequisite: Course 419 or equivalent.

572. Business Policies (2)
An analysis of the problems of business and the functions of management in the determination of business policy in the areas of internal organization, financial policies, operating methods; and the nature, objectives, and elements of business policy determination.
603. Seminar in Business Research (3)
A review and evaluation of current research in business giving consideration to the implication of findings for the improvement of business practices. Not for credit on the qualifying paper or thesis. Prerequisite: Course 503 or consent of instructor.

604. Independent Study in Business (1-2)
Open to students qualified to do individual study in business. Not for credit on qualifying paper or thesis. May be repeated to a maximum of 6 semester hours credit. Prerequisite: Consent of instructor.

605. Thesis for Certificate of Advanced Study (3)
Prerequisite: Course 503 or equivalent.

611. Readings in Management (1)
Special readings useful to a student's individual program and objective, but not available in regular course offerings. May be repeated to a maximum of 3 semester hours credit.

620. Seminar in Personnel Administration (3)
Management's problem, opportunities, and policy alternatives in personnel management and labor relations. The ramifications that labor organizations have on management decision-making.

650. Seminar in Current Business Problems (3)
Contemporary business conditions and problems facing businessmen in the United States. An analysis and evaluation of current literature pertaining to general business activity and the implications of changing business conditions.

661. Seminar in Management (3-6)
Management problems at the various levels of business organization and the role of management in the determination of business policies and procedures.

670. Seminar in Insurance Problems (3)
A graduate seminar for advanced students of insurance dealing with those problems concerned with client-agency and company-agency relations.

FINANCE

416. Life, Accident, and Sickness Insurance (3)
Growth and functions of life insurance; kinds of policies and their uses; surrender values and policy loans; accident and sickness coverages; assessment insurance; group insurance.

417. Property and Casualty Insurance (3)
Principles underlying the underwriting of property and casualty lines of insurance, functions of the various types of insurance; types of hazards and their significance; analysis of the standard fire policy.

418. Real Estate Principles (2)
Real estate ownership and interest, contracts, title transfer, deeds, mortgage instruments, and leases. Brokerage, real estate development, property management, and appraising.

420. Investment Principles (2)
Classification and analysis of the contractual features of securities; the mechanics of investment; tests to be applied in the selection of securities for personal and business portfolios; significant financial institutions; and the determination of the qualities of securities based on an analysis of financial statements. Prerequisite: Course 222.

423. Business Statistics I (3)
Collection and presentation of data; introduction to frequency distribution, time series, index numbers and correlation, especially as they apply to business situations. Prerequisite: Mathematics 115 or equivalent.

424. Business Statistics II (3)
Linear regression, sampling theory, critical ratio, degrees of freedom, multiple correlation, and coefficient of determination. Prerequisite: Course 423 or comparable course in statistics.

450. Money and Banking (3)
A short historical survey of money and the evolution of banking. The organization and the operation of banks, monetary theory and markets, and the functions of the Federal Reserve System.
451. Commercial Bank Management (2)
An extension of Money and Banking, Course 450. Particular emphasis upon the problems of formulating appropriate lending and investment policies. Relationships of the composition and movement of bank deposits to investment and loan policies stressed. Commercial banking problems covered primarily from the standpoint of the management of an individual commercial bank. Prerequisite: Course 450 or consent of instructor.

459. Electronic Data Processing in Business (2-3)
(Also listed as Accounting 459)
Characteristics of EDP; applications to specific fields; economic feasibility of an EDP installation; problems encountered in converting to and operating an EDP system. Prerequisite: Accounting 222 or consent of instructor.

462. Problems in Business Finance (2)
A critical study of selected problems dealing with promotion and organization, permanent capital, working capital, capital budgeting, dividend policies, and financial problems. Prerequisite: Course 320 or consent of instructor.

480. Corporation Finance I (2)
The nature of corporation finance and its relation to economics, accounting, and law: financial analysis and interpretation; capitalization of earnings; corporate securities, corporate financing and refinancing. Prerequisite: Course 320 or consent of instructor.

481. Corporation Finance II (2)
Corporation finance dealing with expansion, consolidation, concentration, and intercorporate relations; the corporate institution and the problem of monopoly and competition; corporate failure and reorganization; and the problems of economic stability. Prerequisite: Course 480 or consent of instructor.

483. Cyclical Financial Problems (3)
Business fluctuations with special reference to financial problems, thereby giving the student a practical application of economic theory to financial problems. Prerequisite: Courses 423 and 450, or consent of instructor.

581. Quantitative Analysis in Business Research (2)
The use of statistical measurements in business research and their applications in the design of surveys and experiments in business research. Prerequisite: Course 423, Mathematics 220 or equivalent.

582. Investment Management (2)
The theory of valuation of securities, portfolio management, and problems of security analysis. Prerequisite: Course 420 or equivalent.

662. Seminar in Business Finance (3)
A general seminar which includes financial problems peculiar to business finance, investment management, and bank management. The content depends on current developments in finance. In general, financial problems examined both from the viewpoint of business management and that of the economic system.
### Department of Marketing

The Departments of Accounting, Management and Finance, and Marketing offer the following graduate programs in Business Administration.

- Master of Science in Business Administration
- Master of Science in Education in School Business Management
- Certificate of Advanced Study in Business Administration
- Certificate of Advanced Study in School Business Management*

For specific requirements for these degrees, see Business Administration, p. 65.

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### Course Offerings

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
<th>Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>426</td>
<td>Purchasing</td>
<td>(2)</td>
<td>I</td>
</tr>
<tr>
<td></td>
<td>Principles and methods of purchasing materials, supplies, equipment, and parts for producing and distributing businesses. Purchasing procedures, buying policies, stock planning, market appraisals, and functions of the purchasing agent.</td>
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<tr>
<td>443</td>
<td>Marketing Research</td>
<td>(3)</td>
<td>I</td>
</tr>
<tr>
<td></td>
<td>Research methods applied to the field of marketing, including methods of gathering and interpreting data presentation of results; market analyses, consumer surveys, and sales forecasting.</td>
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<tr>
<td>445</td>
<td>Retail Merchandising</td>
<td>(3)</td>
<td>II</td>
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<tr>
<td></td>
<td>Techniques and problems of retail merchandising combined to offer an intensive study of mercantile mathematics, statistics, and control. Determination of prices, mark-ups, and pricing policies; analyses of basic profit elements; methods of inventory evaluation and stock control; sales planning; and expense budgeting.</td>
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<tr>
<td>452</td>
<td>Credits and Collections</td>
<td>(2)</td>
<td>II</td>
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<tr>
<td></td>
<td>The organization, management, and functions of consumer and business credit; the administration and operation of the credit department, including methods of handling credit information and collection procedures.</td>
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<tr>
<td>463</td>
<td>Marketing Problems</td>
<td>(3)</td>
<td>II</td>
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<tr>
<td></td>
<td>Practical marketing problems and cases concerning such aspects of distribution as product promotion, channels of distribution, sales promotion, pricing, and the formulation of marketing policies.</td>
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<tr>
<td>467</td>
<td>International Marketing</td>
<td>(3)</td>
<td>I</td>
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<tr>
<td></td>
<td>Principles and methods of international marketing as related to its promotional aspects, international marketing organization, and technical and financial features of marketing products abroad.</td>
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<tr>
<td>551</td>
<td>Sales Management</td>
<td>(2)</td>
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<tr>
<td></td>
<td>The application of principles of sales and marketing management to the solution of problem situations. The work of sales managers and their role in the marketing process.</td>
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<tr>
<td>552</td>
<td>Retail Management</td>
<td>(3)</td>
<td></td>
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<tr>
<td></td>
<td>Retail distribution and the problems of retail management under current conditions. Problems involving decision making in general retail policies, pricing, merchandise management, control, personnel, and store operation.</td>
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<tr>
<td>553</td>
<td>Public Relations in Business</td>
<td>(2)</td>
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<tr>
<td></td>
<td>Public relations as a marketing tool to supplement the advertising efforts of management, business-community relations, customer-company relations, and business-media relations as these are integrated with business management policies.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>554</td>
<td>Marketing Management</td>
<td>(3)</td>
<td></td>
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<tr>
<td></td>
<td>An analysis of the problems facing marketing managers in the formulation of marketing policies with particular reference to these areas of decision making in sales management, promotion, product development, and marketing channels.</td>
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</tbody>
</table>

*These two programs are offered jointly with the Department of Education.*
558. Advertising Management (3)

The uses of advertising by business which gives emphasis to the patterns of marketing strategy and its various functions; problems in developing and evaluating advertising programs; and management's relationship to advertising agencies.

612. Readings in Marketing (1)

Special readings useful to a student's individual program and objective, but not available in regular course offerings. May be repeated to a maximum of 3 semester hours credit.

660. Seminar in Marketing (3-6)

The problems involved in the performance of the marketing functions at the various levels of distribution and of the problems of policy determination by the manufacturer, the wholesaler, and the retailer.
Department of Mathematics

The Department of Mathematics offers graduate programs leading to the degrees Master of Science in Education and Master of Science and to the Certificate of Advanced Study.

MASTER OF SCIENCE IN EDUCATION

Students who elect a graduate major in Mathematics toward the degree Master of Science in Education must satisfy the following course requirements in Mathematics:

(a) Courses 450 and 451 or equivalents if these courses were not included in the undergraduate program.
(b) Courses 550 and 660.
(c) At least five courses to be selected from Courses 405, 410, 415, 420, 425, 430, 435, 505, 510, 512, 515, 518, 520, 525, 528, 530, 532, 535, 540. At least two of these courses must be on the "500" level.

MASTER OF SCIENCE

Students who elect a graduate major in Mathematics toward the degree Master of Science must satisfy the following course requirements in Mathematics:

(a) Courses 425 and 430 or equivalents if these courses were not included in the undergraduate program.
(b) Courses 530, 532, and 660.
(c) At least five courses to be selected from Courses 405, 410, 412, 415, 418, 420, 422, 435, 505, 510, 512, 515, 518, 520, 525, 528, 535, 540, 605, 612, 615, 625, 632. At least three of these courses must be on the "500" or "600" level.

CERTIFICATE OF ADVANCED STUDY

The requirements for the Certificate of Advanced Study vary according to the background and needs of individual students. Each program must be approved by the Head of the Department of Mathematics.

Course Offerings

402. Teaching Practices in Arithmetic (3)  I, II
The function of arithmetic in the elementary school, selection and organization of material, and good teaching methods as indicated by scientific studies on the teaching of arithmetic.

405. Matrices and Determinants (3)  I
Equivalence of matrices and forms; linear spaces, matrix fields, applications. Prerequisite: Course 320 or equivalent.

410. Mathematics of Statistics I (3)  I or II
Classification and presentation of data; probability: the normal probability curve, errors and computation; moments; curve fitting, including the graduation of the normal curve; and the theory of correlation. Prerequisite: Course 320 or equivalent.

412. Numerical Analysis (3)  I or II
Topics selected from roots of equations, finite difference tables, theory of interpolation, central differences, Lagrange's interpolation formula, inverse interpolation, numerical solution of ordinary differential equations, simultaneous equations, determinants, matrices, Graffe's root squaring method. Prerequisite: Course 321 or equivalent.
415. Advanced Synthetic Geometry (3) I, II
Foundations of the geometric structure; methods of proof and of discovering proof; geometry of the triangle, harmonic section, pole and polar, inversion, cross-ratio, and related topics. Prerequisite: Course 130 or equivalent.

418. Vector Analysis (3) I or II
Basic vector operations with applications to geometry, also gradient, divergence and curl. Green’s theorem, divergence theorem, Stokes’ theorem. Prerequisite: Course 321 or equivalent.

420. Differential Equations I (3) I, II
Methods of solution of ordinary differential equations of the first order and higher orders. Applications of differential equations in solving problems in geometry and in science. Prerequisite: Course 321 or equivalent.

422. Applied Mathematics (3) I or II
Complex variables, elementary theory of analytic functions, conformal mappings. Schwarz-Christoffel transformation and applications; operational calculus, Laplace transform methods and applications; numerical differentiation and integration methods. Prerequisite: Course 321 or equivalent.

425. Introductory Topics in Modern Algebra (3) I or II
An introduction to sets and the basic properties of sets; real and complex numbers; groups, rings, and fields: matrices. Prerequisite: Course 320 or equivalent.

430. Advanced Calculus I (3) I or II
Topics selected from sequences, limits, continuity, differentiation, integration, line integrals, Green’s theorem, improper integrals, infinite series, power series, uniform convergence. Bessel functions, Gamma and Beta functions, implicit functions. Course 530 is a continuation of this course. Prerequisite: Course 321 or equivalent.

435. Foundations of Geometry (3) I or II
Development of postulational systems in geometry, Euclidean geometry, non-Euclidean geometries, projective geometry. Prerequisite: Course 320 or equivalent.

440. History of Mathematics (2) II
The development of each of the several branches of mathematics through the first steps of calculus and outstanding contributors in the field of mathematics. Second nine weeks.

450. Teaching Practices in High School Mathematics I (3) I, II
Mathematics of the seventh, eighth, and ninth years. Social and mathematical aims, selection and organization of content, methods of presenting topics in the classroom, classroom procedure, supplementary instructional equipment, and means of evaluating instruction. Prerequisite: Course 320 or equivalent or consent of instructor.

451. Teaching Practices in High School Mathematics II (3) I, II
Mathematics of the tenth, eleventh, and twelfth years. Topics similar to those listed for Course 450. Prerequisite: Course 320 or equivalent or consent of instructor.

502. The Teaching of Arithmetic in the Elementary School (3) II
(Also listed as Education 502)
Consideration of the implications of research for methods of teaching, and the selection and arrangement of concepts and materials. Prerequisite: Course 402 or equivalent.

505. Theory of Numbers (3) I or II
Topics selected from properties of integers, Euclid’s algorithm, divisibility topics, fundamental theorems of arithmetic, Diophantine equations, prime numbers, Euler’s function, number theoretic functions, Pythagorean triplets, congruences, Euler-Fermat theorems, exponents, primitive roots, indices, quadratic residues and reciprocity law, Lagrange’s theorem, Bernoulli numbers, quadratic forms. Course 605 is a continuation of this course. Prerequisite: Course 320 or equivalent.

510. Mathematics of Statistics II (3) I or II
Continuation of Course 410. Probability and statistical theory, frequency curves, partial correlation, multiple correlation, theory of sampling, Chi-square distribution, and interpolation and graduation. Prerequisite: Course 410 or equivalent.

512. Probability (3) I or II
Topics selected from classical definitions of probability, theorems of total and compound probability, repeated trials, probability of hypotheses, Bayes’ theorem, Bernoulli’s theorem, binomial and Poisson distributions, games of chance, mathematical expectation, laws of large numbers, recurrent events, random walk problems, use of difference equations, probabilities in continuum. Courses 612 is a continuation of this course. Prerequisite: Course 321 or equivalent.
515. Advanced Analytic Geometry (3) I or II
Coordinates and cosines, planes and lines, determinants and matrices, surfaces and curves, quadric surfaces, and transformations. Prerequisite: Course 221 or equivalent.

518. Synthetic Projective Geometry (3) I or II
Projective transformations, ideal elements, cross ratio, duality; poles, polars, collineations, involutions; the theorems of Desargues, Pascal, Brianchon; the projective theory of conics. Prerequisite: Course 321 or equivalent.

520. Differential Equations II (3) I or II
Continuation of Course 420. Further consideration given to ordinary differential equations of the first order and higher order. Partial differential equations of the first and second order. Prerequisite: Course 420 or equivalent.

525. Modern Algebra (3) I or II
Topics selected from number theory, integral domains, rational and real numbers, polynomials, group theory, rings and ideals, algebraic number fields, Galois theory and applications. Course 625 is a continuation of this course. Prerequisite: Course 425 or equivalent or consent of instructor.

528. Theory of Finite Groups (3) I or II
Abstract groups, subgroups, invariant subgroups and the Jordan-Holder Decomposition Theorem. Prerequisite: Course 321 or equivalent.

530. Advanced Calculus II (3) I or II
A continuation of Course 430. Prerequisite: Course 430 or equivalent.

532. Introduction to Complex Variables and Applications I (3) I or II
Topics selected from point sets, paths, regions, continuity and differentiability, the Cauchy-Riemann differential equations, Cauchy’s Integral Theorem, Cauchy’s Integral Formula, Laurent Expansion, singularities, transformations, conformal mapping. Riemann Surfaces. Course 632 is a continuation of this course. Prerequisite: Course 430 or equivalent.

535. Foundations of Mathematics (3) I or II
The construction of the number system, axiomatics, the algebras of sets and statements: symbolic logic, quantification theory, infinite sets, transfinite cardinals and ordinals; the philosophies of mathematics. Prerequisite: Course 321 or equivalent.

540. Topics in Higher Mathematics for Teachers (3) I or II
Selected topics from algebra and geometry including the postulational approach to mathematics, theory of numbers, non-Euclidean geometry, and constructions with ruler and compasses.

550. The Teaching of Secondary School Mathematics (3) I or II
Intensive study of improvement in the teaching of selected topics in secondary school mathematics. Prerequisite: Consent of instructor.

605. Theory of Numbers II (3) I or II
Continuation of Course 505. Prerequisite: Course 505 or equivalent.

612. Probability II (3) I or II
Continuation of Course 512. Prerequisite: Course 512 or equivalent.

615. Point-Set Topology (3) I or II
Algebra of sets, topological spaces, limit points, the topology of Euclidean space; transformations, continuity, homeomorphisms. Varieties of topological space; metric spaces and the metrization theorems. Prerequisite: Course 525 or equivalent or consent of instructor.

625. Modern Algebra II (3) I or II
Continuation of Course 525. Prerequisite: Course 525 or equivalent.

632. Introduction to Complex Variables and Applications II (3) I or II
Continuation of Course 532. Prerequisite: Course 532 or equivalent.

660. Individual Problems in Mathematics and Mathematics Education (2) I or II
Individual problems related to mathematics or to the teaching of mathematics in the elementary or secondary schools. Opportunity for preparation of the qualifying paper if offered. May be repeated to a maximum of 4 semester hours credit. Prerequisite: Consent of instructor.
Department of Music

The Department of Music offers programs leading to the degree Master of Music and to the Certificate of Advanced Study. All programs are arranged in consultation with a departmental adviser and must have the approval of the adviser.

MASTER OF MUSIC

The Master of Music degree may be earned with a major in Music Education or in Performance and Pedagogy in Piano, Voice, or an Orchestral Wind Instrument.

Only those persons whose undergraduate preparation has been at least equivalent to the comparable undergraduate music curriculum at Northern Illinois University will be admitted to a program leading to the Master of Music degree. Students whose previous work fails to meet these requirements may in some cases be permitted to begin graduate work in Music. They will be required, however, to make up any deficiencies, as determined by the Music Department, before being admitted to a Master of Music program. In the case of the Master of Music in Music Education, such deficiencies may be in the area of teacher certification as well as in the area of preparation in the major field.

The completion of the degree Bachelor of Music with a Performance major is the normal prerequisite for admission to a course of study leading to the Master of Music degree in Performance and Pedagogy. Students holding the B.S., B.A., or B.M.E. degree may be eligible, however, if, in the opinion of the Music faculty, they have reached the necessary level of proficiency in the major performance area. Candidates for a program in Performance and Pedagogy must pass an audition in the major performance area before admission to the program.

Requirements:

With a major in Music Education

I. Music theory and composition 4

II. Music history and literature 4

III. Music performance 6
  a) Major instrument or voice 4
  b) Large ensemble 2

IV. Music education and research 8
  a) 525. Foundations of Music Education 2
  b) 524. Techniques of Research in Music 2
  c) 518. Special Problems in Music 4

V. Electives 10
  a) Music electives 4-6
  b) Non-music electives 4-6

Total 32
With a major in Performance and Pedagogy in Piano or Voice

<table>
<thead>
<tr>
<th>Minimum hours required</th>
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<tr>
<td>I. Music history and literature</td>
<td>6</td>
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<tr>
<td>II. *Music performance, major area</td>
<td>10</td>
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<tr>
<td>III. Recital</td>
<td>4</td>
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<tr>
<td>IV. **Electives</td>
<td>12</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
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</table>

*Enrollment in the major performance area is required in each semester or summer session of residence. No more than 16 semester hours of credit for music performance in the major area may, however, be applied toward the 32 hour total.

**Electives chosen from offerings outside the Music Department must embrace a single cognate area totaling at least 6 semester hours.

With a major in Performance and Pedagogy in an Orchestral Wind Instrument

<table>
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<th>Minimum hours required</th>
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<tbody>
<tr>
<td>I. Music theory and composition</td>
<td>4</td>
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<tr>
<td>II. Music history and literature</td>
<td>6</td>
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<tr>
<td>III. Music performance</td>
<td>12</td>
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<tr>
<td>a) Major instrument</td>
<td>10</td>
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<tr>
<td>b) Large and/or small ensemble</td>
<td>2</td>
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<tr>
<td>IV. Recital</td>
<td>4</td>
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<tr>
<td>V. Electives</td>
<td>6</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
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CERTIFICATE OF ADVANCED STUDY

Students wishing to enroll in the sixth-year program leading to the Certificate of Advanced Study in Music should consult with the Head of the Department. Each program will be tailored to the student's individual needs. Admission to a program leading to the Certificate of Advanced Study in Music will be granted only to those candidates who have completed work equivalent to that required for the Master of Music degree at Northern Illinois University.

**Course Offerings**

**MUSIC HISTORY AND LITERATURE**

423. Contemporary Music Trends (2)
A survey of trends in European and American music from about 1910 to the present day. Particular emphasis on music since 1920. Works of Stravinsky, Schoenberg, Bartok, Hindemith, Copland, Piston, Schuman, and others will be performed in class.

437. Piano Literature (2)
A survey of clavier and piano literature to the mid-19th century. For piano majors, or consent of instructor.

438. Piano Literature (2)
A survey of late Romantic and Contemporary piano literature. For piano majors, or consent of instructor.

445. History of American Music (2)
Summer, 1963
The development of music in the United States from the Colonial Period to the present. Particular emphasis on pre-Revolutionary War music and Contemporary compositions.

521. The History and Development of Instrumental Forms and Styles During the 18th and 19th Centuries (2)
Summer, 1963, II
Analytical techniques applied to the sonata, the suite, and related forms.
522. The History and Development of Vocal Forms and Styles During the 18th and 19th Centuries (2)
Analytical techniques applied to the opera, the art song, and related forms.

603. The Renaissance (2)
An introduction to music in the Renaissance (ca. 1450-1600), with study of representative styles.

604. The Art Song Emphasizing the German Lied (2)
The monodic song, the early Italian cantata, the German Lied of the 17th and 18th centuries: Haydn, Mozart, Beethoven, Schubert, Schumann, Brahms, Wolf, Pfitzner, Mahler, R. Strauss, and others. The French, Spanish, Italian, and Russian song. Late English and American contributions. Live and recorded performance.

605. Oratorio Literature (3)
Survey of oratorio and cantata literature from the beginning to contemporary times. Listening to live and recorded music.

606. Survey of Operatic Literature (3)

607. Symphonic Literature (3)
A survey of orchestral music from its beginning. The Mannheim composers, the Viennese classics, the Romanticists, the National schools, the late European and American developments. Works will be analyzed and their historical, cultural, and philosophical background discussed.

608. Chamber Music Literature (3)
Survey of literature of chamber music in various instrumental combinations. The literature is presented through the analysis of formal structure, and aesthetic values are discussed. The core material will include chamber music of Haydn, Mozart, Beethoven, and Brahms.

621. The History of Dance Music (3)
A survey of dances and dance music from the Middle Ages. A brief summary of the recent developments. The Renaissance, the Baroque, the Preclassical, and Classical Periods, and the Romantic era. Dance forms in instrumental music, opera, and ballet. Records, live music, and contemporary graphics.

622. Contemporary Music and the Arts (2)
The relation of music to the other arts in Western Europe and the Americas from 1890 to the present.

626. Music Criticism and Creative Writing (3)
(1) Insight into the problems, principles, and procedures of descriptive and critical analysis and synthesis; (2) an awareness of the relationship of language to the various phases of description and criticism; (3) experience in the precise and expressive use of language

627. Aesthetics of Music (3)
The principles of the aesthetics of music and of the related arts. The nature of the musical experience and the basic materials and aesthetic appeal of architecture, painting, literature, and sculpture.

628. Music Bibliography (3)
A systematic survey of the bibliography of music with respect to music research. Reports and term papers.

MUSIC THEORY AND COMPOSITION

418. Physics of Musical Instruments and Sound (2)  I or II, Summer
The science of musical sound and the physical principles involved in the production of music by the various instruments and the voice. Elements of architectural acoustics of music rooms and acoustical engineering of electronic recorders and reproducers. Open to non-majors by consent of instructor.
505. Advanced Orchestration (2)      Summer, 1964
The scoring of original and other works for various combinations of instruments as well as one complete score for full symphony orchestra.

507. Advanced Counterpoint (2)      I
Analysis and use of contrapuntal devices employed in the passacaglia, canon, and fugue, and the introduction to contemporary linear counterpoint.

547. Vocal Arranging (2)            I
The practical exposition of the principles of choral composing and arranging for various vocal combinations, as well as developing a style of writing for single voice with accompaniment.

552. Composition (2)               Summer, 1963
Composing in mediums and musical forms from solo through works for symphony orchestra and symphonic band and wind ensemble.

598. Band Arranging (2)            II
A practical exposition of the principles of arranging for various wind instrumental solos and ensembles with particular stress on the band and wind ensemble.

601. Evolution of Harmonic Theories I-II (3)-(3)
I. Music theory from antiquity through the Renaissance—Aristoxenus through Cerone and Morley. II. Music theory from Rameau and Fux through contemporary theory.

602. Analytical Techniques for Contemporary Music I-II (3)-(3)
A survey of the theoretical approach of leading contemporary composers. Term paper required.

MUSIC PERFORMANCE

Conducting

512. Advanced Choral Techniques and Conducting (2)      Summer, 1964
A practical exposition of all facets of choral directing, effective rehearsal procedures, score study, and organization of choral ensembles.

513. Advanced Instrumental Techniques and Conducting (2)
Advanced problems in baton techniques and score reading and the analysis of graded band and orchestra literature. Conducting by the student of band and orchestra groups from the University or from the University Music for Youth summer camp.

Piano and Organ

430. Piano (1-2-1)
Development of the basic piano skills necessary for public school teaching. Students must meet required standards of proficiency. For non-piano majors only. Prerequisite: Consent of instructor.

431. Piano (1-2-1)
Continuation of Course 430. Prerequisite: Consent of instructor.

490. Organ (1)
Artistic performance stressed, with proficiency requirements. Open to graduate students by permission.

533. Private Piano (1-4)*
Individual study in the student's major medium of performance. Prerequisite: Consent of instructor.

535. Piano Pedagogy (2)
The methods and materials used in teaching piano either in the public schools or privately. Class piano methods, organization, and materials. Observation of and participation in University piano classes.

593. Private Organ (1-2)
Individual study in the student's major medium of performance. Prerequisite: Consent of instructor.

*2 hours per semester (1 per summer) in the Music Education course of study. 4 hours per semester (2 per summer) in a Performance and Pedagogy course of study. No student may receive 1 hour a semester (2 a summer) until he has passed an audition for admission to a course of study in Performance and Pedagogy and has received permission to register for 1 hour a semester (2 a summer).
Voice

440. Voice (1/2-1)
Development of the basic vocal skills necessary for public school teaching. Students must meet required standards of proficiency. For non-vocal majors only. Prerequisite: Consent of instructor.

446. Vocal Ensemble (1)
The study and performance of selected choral repertoire for men's, women's, or mixed voices. Prerequisite: Consent of instructor.

447. Concert Choir (1)
The study and performance of choral masterworks from the 17th through the 20th century. Prerequisite: Consent of instructor.

485. Chorus (1)
Open to all graduate students proficient in singing and interested in choral activities.

543. Private Voice (1-4)*
Individual study in the student's major medium of performance. Prerequisite: Consent of instructor.

Band and Orchestra

450. Private Woodwinds (1/2-1)
Individual study in a woodwind instrument. For non-woodwind majors only. Prerequisite: Consent of instructor.

456. Instrumental Ensemble (1)
Brass, stringed, and woodwind ensembles. Prerequisite: Consent of instructor.

460. Private Strings (1/2-1)
Individual study in a stringed instrument. For non-string majors only. Prerequisite: Consent of instructor.

470. Private Brasses (1/2-1)
Individual study in a brass instrument. For non-brass majors only. Prerequisite: Consent of instructor.

480. Symphony Orchestra (1)
Open to all qualified graduate students. Two rehearsals a week. Prerequisite: Consent of instructor.

492. University Bands (1)
Open to all qualified graduate students. Four rehearsals a week. Prerequisite: Consent of instructor.

553. Private Woodwinds (1-4)*
Individual study in the student's major medium of performance. Prerequisite: Consent of instructor.

563. Private Strings (1-2)
Individual study in the student's major medium of performance. Prerequisite: Consent of instructor.

573. Private Brasses (1-4)*
Individual study in the student's major medium of performance. Prerequisite: Consent of instructor.

MUSIC EDUCATION AND RESEARCH

509. Supervision and Administration of the Music Program (2)
Summer, 1963, and II
(Also listed as Education 509)
Functions and techniques of supervision and administration of the music program. Emphasis on problems in curriculum, equipment and materials, budget, schedules, and programs. Techniques for in-service training in music for classroom teachers.

*2 hours per semester (1 per summer) in the Music Education course of study. 4 hours per semester (2 per summer) in the Performance and Pedagogy course of study. No student may receive 4 hours a semester (2 a summer) until he has passed an audition for admission to a course of study in Performance and Pedagogy and has received permission to register for 4 hours a semester (2 a summer).
510. Special Music Problems in the Junior High School (2)
Modern theory, techniques, and materials.

511. Workshop in General Music (1)
A short concentrated course covering one or more aspects of General Music at one or more educational levels, with particular emphasis on recent developments and contemporary trends in the field. May be repeated to a maximum of 3 semester hours credit. Not more than 2 semester hours of credit may be applied to the M.M. or the C.A.S.

515. Marching Band Techniques (2)
A study of the various types of marching band presentations for the football, basketball, and street appearances. Includes projects in the development of marching band shows, drills, music, and instrumentation.

517. Understanding the School Music Program (2)
The development of an understanding of the procedures and objectives of a complete school music program, including both vocal and instrumental organizations for grade school, junior high school, and high school. To meet the needs of present and prospective elementary and secondary school administrators. Not open to Music majors. Open only to elementary and secondary school administrators.

518. Special Problems in Music (2 or 4) I, II, Summer
Required of all candidates for the M.M. degree or the C.A.S. in Music. Students majoring in Performance and Pedagogy will prepare and perform a full length public recital and submit an accompanying paper related to the recital material. Candidates for the M.M. degree with a major in Music Education also may present a formal public recital with accompanying paper, or they may elect to present a partial recital in combination with a qualifying paper or to write a thesis. The student's choice must be approved by the departmental graduate faculty. Candidates for the C.A.S. must submit a thesis. May be taken for two semesters for 2 semester hours credit or for one semester for 4 semester hours credit.

519. Measurement, Evaluation, and Guidance in Music (2) II
(Also listed as Education 519)
Measurement includes standardized tests, classroom or studio marking, auditioning, and adjudication. Evaluation weighs such measures of aptitude in the light of professional and educational criteria. Guidance considers the use of these data in counseling programs in public schools and colleges.

524. Techniques of Research in Music (2) II
The nature of research and scientific method; application to problems in music and music education; problem definition; development of a research design; probability and sampling procedure; specialized techniques for the location, collection, quantification, and treatment of data. Required for the M.M. degree with a major in Music Education.

525. Foundations of Music Education (2) I
(Also listed as Education 525)
The historical and philosophical bases of music education. The application of learning theories to problems of music teaching. Required for the M.M. degree with a major in Music Education.

545. Advanced Music Instructional Techniques and Materials—Voice (1) I
Techniques and procedures of teaching vocal production and interpretation in group lessons. Emphasis on current materials in the field.

551. Advanced Music Instructional Techniques and Materials—Woodwinds (1) Summer, 1963
Techniques of class and individual instruction in orchestral woodwind instruments, with particular emphasis upon intermediate and advanced levels. Review and evaluation of solo, ensemble, and other instructional literature for all levels.

561. Advanced Music Instructional Techniques and Materials—Strings (1) Summer, 1964
Techniques of class and individual instruction in orchestral stringed instruments, with particular emphasis upon intermediate and advanced levels. Review and evaluation of solo, ensemble, and other instructional literature for all levels.
571. Advanced Music Instructional Techniques and Materials—Brasses (1)

Techniques of class and individual instruction in orchestral brass instruments, with particular emphasis upon intermediate and advanced levels. Review and evaluation of solo, ensemble, and other instructional literature for all levels.

582. Workshop for Instrumental Directors (1)

A short concentrated course covering one or more aspects of the instrumental music program at one or more educational levels, with particular emphasis upon recent developments and contemporary trends in this field. May be repeated to a maximum of 3 semester hours credit. Not more than 2 semester hours credit may be applied to the M.M. or C.A.S.

586. Workshop for Choral Directors (1)

An intensive discussion and demonstration of practical choral techniques with a view to improving choral rehearsal procedures and performance abilities. May be repeated to a maximum of 3 semester hours credit. Not more than 2 semester hours credit may be applied to the M.M. or C.A.S.

609. Projects and Problems in Music Education (3)

Extensive study of a problem or project chosen by the student for investigation with solution related to practical use in a teaching situation. One or more group projects for study by the class or by committees within the class.

610. Psychology of Music (2)

The functions of the musical mind and the factors involved in the development of musical skills and maturity.

612. Music Teaching Techniques for the Higher Education Level (3)

Symposium of contemporary teaching techniques in applied music, theory, music literature, composition, and music education. Detailed study will be made of national institutional plans for achieving educational objectives in these fields.

613. The Administration of Music in Higher Education (3)

A survey of administrative problems, curricular content, securing of teaching personnel and equipment, the planning of music buildings, and other duties attendant upon the administrator of a music department of a school of music at the higher educational level.

614. College Music Teaching (3)

Lectures on the theory of teaching, philosophic assumptions, aesthetic theories, approaches to education, and the implications for teaching music education, music history and literature, and theory courses at the college level.
Department of Outdoor Teacher Education

It is hoped that a program leading to the degree M.S. Ed. with a major in Outdoor Teacher Education will be approved before September, 1963. The courses listed below have already been approved for graduate credit.

Course Offerings

410. Introduction to Outdoor Teacher Education (3)
To acquaint teachers with the basic concepts of outdoor education. The meaning, scope, and value of outdoor education. Emphasis upon procedures and instructional materials especially suited for teaching out-of-doors. May be taken for either graduate or undergraduate credit and is prerequisite for all required courses in the Department of Outdoor Teacher Education.

504. Historical and Philosophical Development of Outdoor Education (3)
Detailed examination of the meaning and scope of outdoor education. The historical and philosophical foundations of outdoor education. Evolvement of this movement in American Public Education traced and recent significant trends and existing outdoor education programs examined. Prerequisite: Course 410.

511. Advanced Field Experiences in Outdoor Teacher Education (3)
For experienced teachers who wish to supplement and enrich their classroom teaching by including outdoor learning experiences. Ways and means of relating various outdoor learning activities to the various subject matter areas of the school curriculum. Prerequisite: Course 410.

514. Organization and Administration of Outdoor Programs (3)
The initiation and administration of outdoor education experiences of varying lengths. Problems involving the community, school administration, and the teaching staff. Prerequisite: Courses 410 and 504.

516. Development, Maintenance, and Management of Outdoor Education Facilities (3)
The development of outdoor education facilities and resources of various types, including the immediate school area as well as resident facilities. Land acquisition, proper site development, and the health and safety aspects of management. Prerequisite: Courses 410 and 504.
Department of Philosophy

A program for a graduate major in Philosophy is not yet complete; however, qualified students may take the following courses for graduate credit. Students interested in advanced work in this area should consult with the instructor prior to enrollment.

Course Offerings

400. Esthetics (3) I or II
Theories of the nature of art. The philosophic problems and concepts involved in the understanding and criticism of the fine arts. Selected readings from historical and contemporary sources.

412. Symbolic Logic (3) I or II
An introduction to modern mathematical logic covering such topics as axiomatics, relations, the propositional calculus, and the functional calculus. Prerequisite: Course 100 or Mathematics 130 or consent of instructor.

420. Philosophy of Language (3) I or II
The nature, scope, and importance of certain linguistic problems. Representative theories of meaning. The function of symbolism in science, poetry, religion, politics, and morals. Prerequisite: 6 semester hours in Philosophy, including Course 100 or consent of instructor.

440. Theory of Knowledge (3) I or II
A philosophic study of the nature of knowledge, the methods by which it is obtained, and the presuppositions of these methods. Special attention will be given to the philosophic problems of memory, perception, truth, belief, and judgment. Prerequisite: 6 semester hours of Philosophy or consent of instructor.

450. Advanced Ethics (3) I or II
An intensive study of basic ethical problems with special attention to recent developments in ethical theory. Prerequisite: Course 200 or consent of instructor.

460. Philosophy of Science (3) I or II
The nature and historical development of the philosophic foundations, problems, and implications of modern science. Diverse interpretations of the character of scientific knowledge and its place in culture generally. Problems of operationalism, determinism, causality, and the concept of relativity. Prerequisite: 3 semester hours in Philosophy or a major in any of the sciences.

465. 20th Century Philosophy (3) I or II
Some dominant 20th century movements in philosophy including pragmatism, positivism, logical analysis, and existentialism. Special attention will be given to modern developments in analytical philosophy. Prerequisite: 6 semester hours of Philosophy or consent of instructor.

488. Philosophical Issues (3) I, II
Some fundamental issues in theory of knowledge, ethics, and metaphysics and their relations to modern trends of thought. Among the topics discussed will be the mind body problem, determinism and freedom, the nature of ethical judgments, the nature of meaning, the nature of truth, and the nature of causation.

490. Seminar in Philosophy (3) I, II
An intensive study of one major figure, problem, or position in historical or contemporary philosophy. Prerequisite: 9 semester hours in Philosophy or consent of instructor.

495. Special Studies (2-4) I or II
Directed reading on selected topics of an advanced nature. Students will have regular conferences with the instructor and will have the opportunity for detailed discussion of their readings with him. Primarily for Philosophy majors and graduate students. May be repeated to a total of 8 semester hours credit. Prerequisite: 9 semester hours of Philosophy and consent of instructor.
500. Advanced Logic (3)  
A more intensive study of special problems in logical semantics, modal logics, pragmatics or in special logics which do not fit into any accepted pattern of modern logical analysis. A single problem such as partial or complete formalization or several logical problems related to each other may be studied. Prerequisite: Courses 100 and 412 or consent of instructor.

540. Philosophy of Mind (3)  
Some recent developments in philosophy having a bearing on such concepts as perception, thought, intentionality, and belief, and the role of these concepts in such philosophical problems as the relation of mind and body, the veridicality of perception, and the nature of personal identity. Prerequisite: Two courses in Philosophy or consent of instructor.

550. Contemporary Political and Social Philosophy (3)  
A critical study of selected political and social concepts such as justice, equality, freedom, and related issues with reference to the views of representative contemporary thinkers. Prerequisite: Two courses in Philosophy or consent of instructor.
Department of Physical Education for Men

The Department of Physical Education for Men offers programs leading to the degree Master of Science in Education and the Certificate of Advanced Study.

MASTER OF SCIENCE IN EDUCATION

Students working toward the degree Master of Science in Education with a major in the Department of Physical Education for Men must successfully complete a minimum of 18 semester hours of graduate work in that Department. The following courses or equivalents are prerequisites for admission to candidacy for all majors and area majors in Physical Education: Kinesiology, Anatomy, Tests and Measurements in Physical Education, Administration, and two courses in Theory of Coaching.

Candidates are required to take Courses 570 and 671. They must also take either Course 500 or 510 and either Course 520 or 613. Course 570 must be taken prior to registering for the qualifying paper.

CERTIFICATE OF ADVANCED STUDY

All students who wish to pursue a program leading to the Certificate of Advanced Study should have a baccalaureate degree or master's degree or its equivalent in Physical Education. For other requirements, consult with the Head of the Department.

Course Offerings

400. Materials and Problems in Health Education (2-3) I
Health education programs in elementary and secondary schools. Materials and problems involved in teaching health.

410. Tests and Measurements in Physical Education (2-3) I, II
Lectures and laboratory practice in the use of measuring devices in the field of health and physical education. Uses of tests, principles underlying test construction, practice in the administration of tests and in interpreting results.

442. Organization of Extracurricular Activities (3) I
Organizing and conducting an effective program of extracurricular sports. The correlation between physical education class content and intramural and extramural sports. History, objectives, program financing, officiating, and other problems relating to an extracurricular sports program.

500. History and Philosophy of Physical Education (3)
Historical development of physical education from primitive to modern times. Philosophy of modern physical education with application to present day educational programs.

510. Scientific Foundations of Physical Education (3)
Background of physical education from the biological, anatomical, and physiological aspects, with stress on past and present procedures.

511. Psychology of Coaching (3)
The application of principles of psychology to learning situations involved in competitive sports. The general learning situations involved in the mastery of skills and the special situations involved with individual and group problems of motivation and response.

520. Mechanical Analysis of Motor Skills (3)
Investigations of physical principles operative in the performance of physical education activities with attempt to analyze for methods of greater effectiveness and improved performance. Prerequisite: A course in kinesiology.

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521. Care, Treatment, and Prevention of Athletic Injuries (3)
Prevention and correction of accidents in athletic activities. The use of proper personal and field equipment, support methods, conditioning exercises, therapeutic aids, medical examinations, massage, and advanced first aid. Prerequisite: Anatomy and physiology, kinesiology, and first aid.

537. Public Relations for Physical Education (2)
Purpose, materials, and methods relevant to keeping the public informed and interested in the various aspects of the physical education program. A term project for a real or simulated situation will be produced.

538. Planning and Administration of Social Recreation (3)
A treatment of procedures for determining the needs, outlining the plans, and implementing the program of community and special recreation.

541. Organization and Administration of Inter-Scholastic Athletics (3)
Organization of high school athletics with special reference to national, state, and local control. Staff, program, budget, health and safety, and other phases of administration.

542. Advanced Techniques of Coaching (1-3)
A seminar concerned with current trends in the specific areas of inter-school athletic programs. A detailed study of sport techniques.

544. Workshop in Athletic Coaching (1) Summer
An especially designed course for coaching of interscholastic athletics. New developments in the technique of coaching are studied through the use of lectures, discussion, demonstration, and films. Outstanding specialists in the field of athletics will present material on recent developments in equipment, practice, theory, and philosophy.

570. Seminar in Research Studies in Physical Education (3)
The methods and purposes of research in physical education. Each student will do the preliminary work for an independent research problem.

613. Advanced Tests and Measurements in Physical Education (3)
Principles of construction and administration of physical performance tests. Fundamental statistics leading to interpretation of results of testing. Prerequisite: Course 410 or equivalent.

631. Seminar in Physical Education Curriculum (2)
Recognition of and proposed solutions to controversial issues involving organizational setup, legal aspects, and administrative problems of correlating the physical education program with other aspects of the school program. Particular attention given to the practical problems of the individual members of the class.

632. Supervision of Physical Education (3)
Methods and policies of the school supervisor of physical education; critical studies of methods of instruction and procedures in supervision applicable to physical education. Planning and improving programs; in-service training; relationships with administration, types of conferences.

634. Planning and Use of Facilities for Physical Education (3)
Principles, terminology, and standards for planning, construction, use, and maintenance of facilities for the indicated programs. Standard authoritative references studied and critically evaluated.

635. Advanced Administration of Physical Education (3)
The organizational and administrative problems of physical education on the high school level. Aims and objectives and administrative policies.

671. Individual Research Problems (1-3) I, II
Individual investigation of a problem in physical education, health, or recreation that will involve one of the techniques of research. Students will work under a designated member of the staff and must have their problems approved before registering.
Department of Physical Education for Women

The Department of Physical Education for Women offers programs leading to the degree Master of Science in Education and to the Certificate of Advanced Study.

A candidate for an advanced degree in Physical Education is expected to have completed an undergraduate major in Physical Education. Deficiencies at the undergraduate level will be determined by the departmental graduate faculty and must be removed prior to admission to candidacy.

A graduate student must plan her program of study in consultation with an assigned departmental adviser. The program will be submitted for approval to the Graduate Advisory Committee of the Department.

Non-resident students are strongly advised to arrange appointments with their advisers prior to coming to the campus to plan programs or enroll in graduate courses. Signatures, denoting approval of the adviser, must be secured prior to registration.

MASTER OF SCIENCE IN EDUCATION

Candidates for the degree Master of Science in Education with a major in the Department of Physical Education for Women must successfully complete a minimum of 20 semester hours of graduate work in that Department. Exceptions must be approved by the Graduate Advisory Committee of the Department. A minimum of 10 semester hours of graduate course work must be elected in courses outside the major field. A total of 32 semester hours of graduate credit is required for the degree.

Degree requirements include the following:
1. Removal of all deficiencies prior to admission to candidacy,
2. Courses 570 and 573,
3. Approval of the research report by the candidate's Advisory Committee,
4. Satisfactory completion of the written comprehensive examination,
5. An oral examination at the option of the candidate's Advisory Committee.

CERTIFICATE OF ADVANCED STUDY

The sixth-year program leading to the Certificate of Advanced Study offers the opportunity to experienced teachers, supervisors, and administrators to develop further competence through advanced study and research.

An applicant for admission to the sixth-year program must have completed an undergraduate major in Physical Education and possess the master's degree or equivalent with a major in Physical Education. The program of courses must be planned with and approved by an advisory committee from the major department. Admission to candidacy is dependent upon successful completion of 12 semester hours of work in courses approved for the candidate's program.

Students planning to apply for admission to the sixth-year program with a major in the Department of Physical Education for Women should consult with the Head of the Department.
445. Elementary Tests and Measurements (2) II
Construction, use, and administration of skill and knowledge tests in health and physical education. Evaluation of measurement tools.

446. Health Education Problems (2) I, II
Problems, techniques, and materials related to programs of health education in elementary and secondary schools with specific reference to combined programs of health and physical education.

448. Organization and Supervision of Co-curricular Programs for Junior and Senior High Schools (3) II
Functions and contributions of intramural and extramural activities as part of junior and senior high school physical education programs. Organization of play days, sport days, tournaments, demonstrations, and State G.A.A. program.

451. Body Mechanics (3) I, II
Principles and analysis of human motion in everyday life and physical education activities. Analysis and procedure in the control of atypical deviations. Additional laboratory work will be required. Prerequisite: Course 313 or equivalent.

452. Physiology of Activity (3) I, II
The functioning of the systems of the body during activity: the physiological adaptations during work; and the lasting changes which result from different levels of performance. Practical experience in selected experimental procedures. Prerequisite: Human anatomy and physiology.

453. Adapted Physical Education (3) II
Modification of physical education activities to meet the needs of the physically handicapped. Materials, methods, and the development of a program of adapted physical education activities. Prerequisite: Consent of instructor.

460. Folk, Square, and Social Dance in Education (3) I
Identification and analysis of methods specific to the traditional dance forms. Opportunities for class organization, teaching, and evaluation.

465. History and Philosophy of Dance (3) I
Survey of the historical development of dance from primitive man to the contemporary period. Philosophical concepts and significant trends relative to dance and associated areas.

467. Dance Notation (3) II
Historical survey of movement notation methods used throughout the world. Theory and practice in writing various methods, with concentration on Labanotation.

500. History and Philosophy of Physical Education (3) I, II
Historical background of physical education in relation to the cultural patterns of civilization and educational movements. Development of philosophical concepts paralleling educational philosophy. Application of basic philosophy to the instructional program.

510. Applied Anatomy (Kinesiology) (3) I
Analysis of joint and muscle action in the balance and movement of the human body in everyday and physical education activities. Prerequisite: Anatomy.

512. Fundamental Basis of Movement (3) I, II
The various systems of the body and their application to body movement. Practical application to physical education activities. Designed primarily for the classroom teacher. Open to Physical Education majors on approval of instructor.

532. Principles of Supervision of Health and Physical Education (3) II
Techniques and procedures of supervision in school health and physical education programs. Prerequisite: Teaching experience.
540. Seminar in Elementary School Physical Education (3)  
Present day programs and problems related to elementary school physical education.

543. Administration of Health and Physical Education (3)  
Methods and procedures of administration in school physical education programs.

544. Problems in Curriculum and Program of Physical Education (3)  
A seminar concerned with individual investigation of principles and procedure in developing the physical education program for elementary and secondary schools.

545. Curriculum in Health and Physical Education for Junior High Schools (3)  
Principles and procedures applicable to health and physical education programs at the junior high school level.

546. Evaluation in Health and Physical Education (3)  
Uses and limitations of evaluating devices, construction and administration of tools for evaluations, and interpretation of results. Prerequisite: Course 445 or consent of instructor.

549. School and Community Recreation (3)  
Administrative problems, personnel standards, finance, facilities, and programs. Analysis of organizational plans for cooperative development of school community programs.

550. Camp Administration (3)  
Administrative problems, selection of personnel, organization of programs, selection, maintenance, and supervision of facilities.

555. Seminar in Teaching Skills (3)  
Practical and theoretical study of methods of teaching physical activities. Scientific foundations of education.

560. Seminar in Rhythms and Dance (3)  
Rhythms and dance as a basic educational technique. Designed to assist in planning, teaching, and supervising the rhythmic program. Experiences in the group process. Prerequisite: Consent of instructor.

565. Seminar in Motor Development in Childhood (2-3)  
Survey of research on acquisition of motor skills with emphasis on findings pertaining to growth patterns, modifiability, and specificity. Application to methods and principles of teaching physical education in pre-school and elementary school. Development of special study topic for third hour of credit. Prerequisite: Course 512 or equivalent.

566. Seminar in Movement Education (2-3)  
The approach to movement education as the core of physical education. Designed for teachers of kindergarten through college, including classroom teachers and specialists in physical education. Development of an individual problem and special conferences. Prerequisite: Course 302 or 343 or equivalent.

569. Independent Study in Health, Physical Education, and Recreation (1-3)  
Open to qualified students who wish to do advanced study in the areas of health education, physical education, or recreation. Study planned in consultation with adviser. Special conferences and development of report. May be repeated to a maximum of 6 semester hours credit. Prerequisite: Consent of adviser.

570. Methods of Research in Physical Education (3)  
Introduction to methods and techniques; research design and development; resources; and the research report. Required of departmental majors prior to registration in Course 573 or 673. Prerequisite: Consent of adviser.

571. Source Materials in Physical Education and Related Areas (2)  
Opportunity for extensive reading in health, physical education, and related areas. Current instructional materials.

572. Current Trends in Physical Education (2)  
Contemporary trends in the field of physical education and related areas.

573. Research Problems in Physical Education (1-3)  
Opportunity to work individually under guidance. Must be taken by a student doing the research paper. Prerequisite: Course 570 or equivalent.
575. Philosophical Bases of Physical Education and Recreation (3) I
To develop a better understanding and appreciation of the purposes, values, nature, scope, and significance of physical education and recreation in America.

612. Physiological Aspects of Motor Activity (3) I, II
The physiological effects of physical activity on the various systems of the human organism. Selected problems for experimentation and research. Prerequisite: Anatomy and physiology.

620. Teaching Physical Education at the College Level (3)
Discussion and evaluation of problems of instruction in physical education on the college level. Development of an individual problem. Prerequisite: Teaching experience and Course 396 or equivalent.

632. Advanced Supervision of Physical Education (3)
Principles and practices in supervision. Open only to supervisors of elementary and secondary school programs, cooperating teachers, and school administrators.

636. Program and Facilities for Physical Education (3)
The special facility requirements for physical education programs for girls and women. Principles, standards, functional lay-out, design and construction features for indoor and outdoor facilities. Maintenance, use, scheduling, and supervision of facilities in terms of functional needs. Individual projects. Prerequisite: Course 440 or 543 or equivalent.

643. Seminar in Administration of Physical Education, Health Education, and Recreation Programs (3) I
Analysis of problems specifically related to departmental organization in high schools, colleges, and universities. Consideration of individual problems.

673. Advanced Research Problems (1-4) I, II
Must be taken by a student doing the research for the thesis. Approval of the research study must be granted prior to registration. Prerequisite: Course 570 or equivalent.
Department of Physics

The Department of Physics offers programs leading to the degrees Master of Science in Education and Master of Science and, at sixth-year level, to the Certificate of Advanced Study. The Departments of Biological Sciences, Chemistry, Earth Sciences, and Physics cooperate in offering an area major in General Science leading to the degree Master of Science in Education.

MASTER OF SCIENCE IN EDUCATION

Major in Physics

Students who elect a graduate major in Physics leading to the degree Master of Science in Education must take a minimum of 11 semester hours from the offerings of the Department of Physics.

Area Major in General Science

Students who elect an area major in General Science will find the requirements listed under Biological Sciences.

MASTER OF SCIENCE

A candidate seeking to qualify for the degree Master of Science with a major in Physics shall satisfy the following departmental requirements:

a. The candidate must meet the requirements for the B.S. degree in Physics at N.I.U. In some cases deficiencies in courses of "400" level may be made up for credit as part of the 12 semester hours of electives in the M.S. requirements.

b. A minimum requirement is 20 semester hours in Physics of which at least 2 semester hours must be Course 555 and, in addition, at least 6 semester hours from 500 or 600 level courses excluding Courses 559 and 659. The remaining 12 hours required to satisfy the minimum of 32 hours for the graduate degree are to be chosen from Physics and/or closely related fields after consultation with the adviser.

c. Proficiency examinations may be administered at an early stage of the program for the purpose of aiding the adviser in the preparation of a course of study for the candidate and counseling the candidate as to the advisability of continuing in the program for the M.S. degree.

d. The student must pass a reading knowledge examination in one of the following languages: French, German, or Russian.

CERTIFICATE OF ADVANCED STUDY

The Certificate of Advanced Study may be awarded to students pursuing programs in either Physics or Chemistry beyond the master's degree. This certificate is given, in accordance with the general requirements of the Graduate School, to those students following a sequence of courses approved by the Department Head or by the assigned adviser. The program of courses to be taken will be drawn up with consideration being given to the student's interests and background.

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Course Offerings

450. Advanced General Physics (2-4)
Topics selected to furnish thorough background for teaching. Not open to Physics majors. Two to six periods a week. Prerequisite: Courses 250-251.

451. Advanced General Physics (2-4)
Continuation of Course 450. Not open to Physics majors. Two to six periods a week. Prerequisite: Course 450 or equivalent.

460. Quantum Mechanics I (3)
Schrodinger wave equation, eigen-values and eigen functions, methods of approximation, and simple applications. Prerequisite: Course 400.

463. Statistical Mechanics (3)
Distribution functions; transport phenomena; Maxwell-Boltzmann, Fermi-Dirac, and Bose-Einstein Statistics. Prerequisite: Course 320.

466. Solid State Physics I (3)
Thermal and electrical properties of metals, semi-conductors, and insulators. Crystal structure, selected applications. Prerequisite: Course 370 and Mathematics 420.

470. Electricity and Magnetism II (3)
Mathematical treatment of electricity and magnetism. Maxwell's equations. Prerequisite: Course 370 and Mathematics 420.

472. Physical Measurements (2)
Special laboratory problems. Prerequisite: Course 371.

477. Introduction to Astro-Physics (3)
Kepler's laws and solar system, analysis of solar radiations, nuclear reactions in the sun, and other selected topics. Prerequisite: Course 300.

480. Modern Physics (3)
Electrons, waves and particles, special relativity, hydrogen atom, atomic and molecular spectra. Selected topics from nuclear and solid state physics. Prerequisite: Course 300 and Mathematics 420.

481. Modern Physics Laboratory (2)
Laboratory supplement to Course 480. Four periods a week for one semester or eight periods a week for nine weeks. Prerequisite or co-requisite: Course 480 or equivalent.

482. Nuclear Physics I (3)
Radioactivity, nuclear structure and reactions. Prerequisite: Course 480.

485. Methods of Mathematical Physics II (3)
Continuation of Course 385. Tensors and matrices, special functions (polynomials, Bessel functions, etc.), calculus of variation. Prerequisite: Course 385.

490. Science in the Public Schools (3)
For teachers, supervisors, and administrators in the elementary and junior high schools. Problems of science teaching in elementary and junior high schools. Principles and applications of physics illustrated by simple apparatus constructed by members of the class. Not open to Physics majors or minors. Four periods a week. Prerequisite: Course 150 or equivalent.

499. Teaching of Physical Sciences (2)
(Also listed as Chemistry 499. See page 73.)

505. Institute for Science Teachers (1-8)
Lectures, demonstrations, laboratory work, and field trips, designed for the science teacher. Subject matter from the fields of chemistry, physics, biology, and earth sciences. May be repeated to a maximum of 16 semester hours credit. On application to Institute Director and by invitation only.

555. Physics Seminar (1-2)
Problems in physics discussed under guidance of staff. May be repeated for credit, but total credit is limited to 6 semester hours. Prerequisite: Graduate standing and consent of Department.
559. Special Problems in Physics (1-10)
   Special problems in physics under supervision of staff. Problems may be technical in nature or concerned with teaching procedure. May be repeated for credit, but total credit is limited to 10 semester hours. Prerequisite: Graduate standing and consent of Department.

560. Quantum Mechanics II (3)
   Matrix algebra, perturbation theory, Dirac theory of electron. Prerequisite: Course 460.

566. Solid State Physics II (3)
   Thermal and electrical properties of metals, semi-conductors, and insulators; crystal structure. Prerequisite: Courses 466 and 463. Co-requisite: Course 460.

570. Electromagnetic Theory (3)
   Maxwell's equations, multipole radiation, Lorentz electron theory, wave guides. Prerequisite: Courses 470 and 485.

580. Atomic Physics (3)
   Atomic spectra, Zeeman effect, Stark effect, Hyperfine structure. Prerequisite: Courses 480 and 460.

581. Nuclear Physics Laboratory (2)
   The properties of particles from natural and artificial disintegration of nuclei; the corresponding measuring instruments. Prerequisite: Course 482.

582. Nuclear Physics II (3)
   A continuation of Course 482. Prerequisite: Courses 482 and 460.

585. Theoretical Physics I (3)
   Fields, variational principles, approximate methods, Green's functions, integral equations of physics. Prerequisite: Courses 485 and 460 or equivalent.

586. Solid State Physics II (3)
   Thermal and electrical properties of metals, semi-conductors, and insulators; crystal structure. Prerequisite: Courses 466 and 463. Co-requisite: Course 460.

587. Quantum Mechanics III (3)
   Relativistic quantum mechanics, the Klein-Gordon equation, Coulomb scattering, Dirac equation, quantization of scalar, electromagnetic, and spinor fields. Prerequisite: Courses 560 and 585.

659. Research (1-8)
   Topic selected with consent of staff. Prerequisite: Consent of Department.

660. Quantum Mechanics III (3)
   Relativistic quantum mechanics, the Klein-Gordon equation, Coulomb scattering, Dirac equation, quantization of scalar, electromagnetic, and spinor fields. Prerequisite: Courses 560 and 585.

682. Theoretical Nuclear Physics (3)
   Theory of light nuclei, nuclear forces, nuclear models, nuclear reactions, nuclear spectroscopy. Prerequisite: Courses 560 and 582.

690. A-B-C-D-E, Special Topics in Physics
   A—Classical and Relativistic Theories (1-6)
   B—Quantum Physics (1-6)
   C—Reactor Physics (1-6)
   D—Plasma Physics (1-6)
   E—Solid State Physics (1-6)

Lectures and discussions on topics in various fields of physics at the graduate level. 1 to 6 semester hours credit as scheduled; course may be repeated in one or more fields of physics. 6 semester hours is the maximum in any one area; not more than 15 semester hours will count toward a master's degree. Prerequisite: Graduate standing and consent of Department.
The Department of Political Science offers graduate programs leading to the degrees Master of Arts and Master of Science in Education and to the Certificate of Advanced Study. Study for the doctorate in Political Science, if and when the degree is authorized, will be integrated with these programs.

Five fields of concentration are available in Political Science: American Government and Politics, International Affairs, Foreign and Comparative Government, Political Theory and Political Behavior, and Public Administration. Graduate study may lead to careers in government service (federal, state, and local), community group work, teaching, and professional writing and research. The Public Administration Program offers professional preparation leading to internship opportunities in government agencies as part of course work toward a graduate degree; active efforts are made to place students in career government positions upon completion of their studies. Foreign study and overseas internship opportunities also exist in the Comparative Government concentration. All programs are related to the student’s career objectives by the departmental adviser.

**MASTER OF ARTS**

Students interested in pursuing a Master of Arts degree with a major in Political Science normally should have had at least 9 undergraduate semester hours in Political Science. When this is lacking, the student may be required to compensate during the graduate program.

Of the 32 semester hours of graduate credit required for the degree, at least 24 semester hours are to be taken in Political Science at the graduate level, including:

1. Not less than 9 semester hours in one, and 6 semester hours in a second of the five fields of concentration listed above.
2. Course 550 (Scope and Method of Political Science—3 hours).
3. Course 649 (Thesis—6 hours).

The remaining hours may be taken in Political Science or some closely related field in accordance with the recommendations of the departmental adviser and the student’s committee. A qualifying examination may be required prior to departmental recommendation to candidacy for the degree, and final written and oral examinations also are required, depending upon the student’s areas of concentration and/or thesis subject.

**MASTER OF SCIENCE IN EDUCATION**  
**(AREA PROGRAMS)**

The Department of Political Science cooperates with such other departments as Economics, Education, History, Journalism, and Sociology and Anthropology to devise area programs leading to this degree. The actual division of course study to produce the required 32 semester hours is determined by the student with advisers representing the departments concerned. A minimum of 8 hours in Political Science is necessary, and approximately 16 hours normally will be required. A qualifying research
study must be written and Course 549 (Independent Study) may be used by students to earn 2-4 semester hours for this research.

CERTIFICATE OF ADVANCED STUDY

Any student with a master's degree who meets the admission requirements of the Graduate School and has a good graduate record will be permitted to pursue the Certificate. Of the 30 semester hours of credit required, not less than 20 hours must be Political Science, divided approximately equally between any two of the five fields: American Government and Politics, International Affairs, Foreign and Comparative Government, Political Theory and Political Behavior, and Public Administration. A significant research study in one of the fields of concentration is required, and 2-4 semester hours credit may be obtained for work on it in an independent study course. These semester hours may be counted in the relevant concentration field. Reading knowledge of a foreign language as well as a qualifying examination prior to admission to candidacy also may be required. A final comprehensive examination, written and/or oral, is required.

CERTIFICATE OF ADVANCED STUDY (AREA PROGRAMS)

The Department of Political Science cooperates with other departments to devise area programs leading to this certificate. Students in such area programs shall select one department for major concentration and a second for minor concentration, the exact distribution of courses to produce the required 30 semester hours being determined in consultation with department faculty advisers. A significant research study, for which 2-4 semester hours of independent study may be obtained, and a final comprehensive examination are required.

Course Offerings

AMERICAN GOVERNMENT AND POLITICS

445. American Constitutional Development (3)
American constitutional law and its growth, based on an analysis and discussion of leading judicial decisions, with attention to the environmental setting of the cases. Prerequisite: Course 140 or equivalent.

520. Administrative Law (3)
The law as it affects public officials and their activities, the legal control of relations of public and private groups, rights and duties of interested parties.

544. Legislative Behavior (3)
Research and discussion of problems in legislative organization.

645. Seminar in American Government and Politics I-II (3)
Research and discussion of selected topics. May be repeated to a maximum of 6 semester hours credit.

INTERNATIONAL AFFAIRS

460. International Organization (3)
The origins, structure, and functioning of the United Nations and its specialized agencies. Contemporary problems. Prerequisite: Course 140 or equivalent. Recommended: Course 210 or equivalent.
461. Foreign Policies Abroad (3)
The traditional and contemporary foreign policies of such major countries as Great Britain, France, Germany, India, Communist China, and Japan. Prerequisite: Course 140 or equivalent. Recommended: Course 210 or equivalent.

541. International Law (3)
Principles of the international law of Peace, War, and Neutrality.

546. Soviet Foreign Policy (3)
The traditional objectives of Russian foreign policy and the contemporary policies of the Soviet Union.

560. The Commonwealth of Nations (3)
The development, structure, and functioning of the Commonwealth as an international organization.

644. Seminar in International Politics (3)
Research and class discussion of selected topics.

FOREIGN AND COMPARATIVE GOVERNMENT

443. Government and Politics in Western Europe (3)
An analysis of governmental institutions, political processes, and environmental factors which affect political behavior in such countries as France, Germany, and Italy. Prerequisite: Course 140 or equivalent. Recommended: Course 230 or equivalent.

444. Government and Politics in the Soviet Union (3)
Russian society and the development, structure, and functioning of government and politics in the U.S.S.R. Prerequisite: Course 140 or equivalent. Recommended: Course 230 or equivalent.

446. Governmental Systems in the Far East (3)
Political and administrative institutions, processes, and politics in such countries as contemporary China, Japan, and India in terms of their cultures, traditions, and current problems. Prerequisite: Course 140 or equivalent. Recommended: Course 230 or equivalent.

448. Government and Politics in Eastern Europe (3)
The development, structure, and functioning of government and politics in the East European societies other than the U.S.S.R. Prerequisite: Course 140 or equivalent. Recommended: Course 230 or equivalent.

450. Governmental Systems in Southeast Asia (3)
A comparative study of governmental and administrative institutions, processes, and politics in such countries as contemporary South Viet-Nam, Malaya, Cambodia, Laos, Thailand, and Indonesia in terms of their cultures, traditions, current aspirations, and problems. Prerequisite: Course 140 or equivalent. Recommended: Course 230 or equivalent.

452. Governmental Systems in Latin America (3)
An analysis of governmental and administrative institutions, processes, and politics in selected countries of Latin America in terms of their cultures, traditions, current aspirations, and problems. Prerequisite: Course 140 or equivalent. Recommended: Course 230 or equivalent.

453. British Government and Politics (3)
The development, structure, functions, and processes of government and politics in Great Britain. Prerequisite: Course 140 or equivalent. Recommended: Course 230 or equivalent.

547. Governmental Systems in Africa (3)
Colonialism and nationalism in Africa; the emergence of independent governments; contemporary political and administrative problems.

643. Comparative Political Parties (3)
Political party systems in major foreign countries.

646. Seminar in Comparative Government (3)
Research and class discussion of selected topics in government and politics of various national states.

655. Foreign Study and Internship (3-9)
Individual research, study, and work abroad. May be counted in Public Administration concentration.
POLITICAL THEORY AND POLITICAL BEHAVIOR

420. Political Opinion and Behavior (3)
The nature and formation of political opinion, techniques for its measurement, political and electoral behavior. Prerequisite: Course 140 or equivalent. Recommended: Course 370 or equivalent.

441. Modern and Contemporary Political Thought (3)
The major political theories developed since the advent of the nation-state. Democracy, Socialism, Fascism, and Communism. Prerequisite: Course 140 or equivalent. Recommended: Course 370 or equivalent.

442. American Political Thought (3)
Leading American political thinkers and their ideas from colonial times to the present. Prerequisite: Course 140 or equivalent. Recommended: Course 370 or equivalent.

521. Jurisprudence (3)
The nature and source of law, law and the state, law and justice, principal schools of legal theory, the role of law in political behavior.

640. Seminar in Political Thought and Behavior (3)
Research and class discussion of selected topics.

641. Theory and Practice of Communism (3)
Marxism and the origins of modern communism. The theories of Lenin, Trotsky, Stalin, Mao Tse-Tung, and Tito. Discussion of the practice of communism in the Soviet Union, Soviet Satellites, and China; the international communist movement.

PUBLIC ADMINISTRATION

402. Administration in Government (3)
The general organization of the federal administration and its role in the political process. Relation to executive political leadership, the Congress, judiciary, pressure groups, and public opinion. Prerequisite: Course 140 or equivalent. Recommended: Course 347 or equivalent.

405. Municipal Government and Administration (3)
The organization, politics, problems, and administration of urban government in the United States. May be counted in American Government concentration. Prerequisite: Course 140 or equivalent. Recommended: Course 340 or 347 or equivalent.

415. Public Policy Formulation (3)
The dynamics of public policy formulation in the executive branch of government. May be counted in American Government concentration. Prerequisite: Course 140 or equivalent. Recommended: Course 347 or equivalent.

447. Public Personnel Administration (3)
Personnel theory and practice in public administration. Recruitment and selection, job and salary classification, grievance and complaint procedures, human relations, retirement. Prerequisite: Course 140 or equivalent. Recommended: Course 347 or equivalent.

457. Fiscal Administration (3)
Basic concepts and practices in government budget and finance administration. Prerequisite: Course 140 or equivalent. Recommended: Course 347 or equivalent.

458. Organization and Methods in Public Administration (3)
Basic concepts and techniques in connection with management analysis. Organization theory. Prerequisite: Course 140 or equivalent. Recommended: Course 347 or equivalent.

647. Seminar in Public Administration (3)
Research and discussion of selected topics.

648. Seminar in Comparative Public Administration (3)
Research and discussion of administrative problems, processes, and methods in various governments. May be counted in Foreign and Comparative Government concentration.
651. Seminar in Governmental and Administrative Problems of Underdeveloped Countries (3)  
Research and discussion of selected topics. May be counted in Foreign and Comparative Government concentration.

656. Internship in Public Administration (2-6)  
Individual work in government agency. May be repeated. Prerequisite: Written consent of Department Head.

GENERAL

490. Materials and Problems of High School Instruction I, II in the Social Sciences (2)  
Offered in conjunction with the Departments of History, Sociology and Anthropology, and Economics.

491. Materials and Problems of Elementary School Instruction I, II in the Social Sciences (2)  
Offered in conjunction with the Departments of History, Sociology and Anthropology, and Economics.

495. Seminar in Current Problems (2-4)  
Issues and policies in government, politics, and economics in their historical and sociological perspectives. May be repeated. Prerequisite: Consent of departmental adviser.

549. Independent Study in Political Science (2-4)  
Open to qualified students who wish to do individual advanced work in political science. Qualifying research papers for M.S. in Ed. and C.A.S. may be written under this course. May be repeated. Prerequisite: Written consent of Department Head or department graduate student adviser.

550. Scope and Method of Political Science (3)  
Methodology for thesis preparation, research problems, discussions, and criticism.

649. Thesis (2-6)
Department of Psychology

MASTER OF ARTS

The Master of Arts degree, with a major in the field of Psychology, is designed to give the student an adequate graduate foundation on which to build the remainder of his professional education. It is recognized that in no way should the M.A. in Psychology be regarded as a terminal degree from the professional standpoint, since there are few opportunities in the field of Psychology for one with this limited educational level. There is need for further preparation before one can be regarded as a psychologist, either in the research or applied areas. The major is designed to give the student: (1) some core experiences in the field of Psychology; (2) an opportunity to do some intensive study in a restricted area of the field; (3) an opportunity to take two or three courses from outside the field of Psychology to enrich his educational experiences; and (4) experience in research and thesis writing.

Students who elect a graduate major in Psychology must satisfy the following requirements:

- Required Core Courses: 500, 501, 502, 503 12 hours
- Cognate Courses: To be determined by the student and his adviser 6-9 hours
- Area of Concentration in Psychology: To be determined by the student and his adviser 8-11 hours
- Thesis: 599 3 hours

32 hours

Course Offerings

405. Industrial Psychology (3)  I
The functions of psychology as a science and as a profession in contemporary industry. Emphasis on the technical literature in the field. Prerequisite: Course 102.

415. Psychology of Exceptional Children (3)  I, II
Psychology of atypical children—gifted, mentally subnormal, physically handicapped, chronically ill, and socially maladjusted. Their needs and dynamics of behavior in home, classes, and institutions. Prerequisite: Course 102.

416. Introduction of Psychopathology (3)  I, II
An introduction to the study of abnormal behavior with emphasis on the neuroses and psychoses. The dynamics of mental disorders and psychological factors involved in treatment of mental disorders. Prerequisite: Course 102 and one additional Psychology course.

426. Interpreting Theories of Personality (3)  II
A systematic study of theoretical contributions of major psychologists to basic understanding of the dynamics of human personality. Prerequisite: Course 102 and one other Psychology course.

428. History and Systems of Psychology (3)  II
The major viewpoints in earlier systematic psychology and their relations to contemporary systematic trends. Prerequisite: Course 102.

435. Theories of Learning (3)  II
A general study of theories of learning with particular emphasis on theories which have emerged from the psychological laboratory. Prerequisite: Course 102.

465. Developmental Psychology (3)  I, II
The span of life from conception to death, emphasizing the outstanding characteristics of normal behavior for each period. Prerequisite: Course 102.
485. Individual Study in Psychology (1-3)  
Qualified students interested in specific problems in psychology may take this course, working with any faculty member of the Department. The student must have written permission from the faculty member with whom he is doing the work and the Head of the Department. May be repeated to a maximum of 6 semester hours credit.

500. Pro-Seminar in Psychology (3)  
Orientation to the world of contemporary psychology. Familiarizes students with major areas, departmental staff, and program at Northern. A common experience in the field for all Psychology students.

501. Foundations of Psychological Research (3)  
Consideration of philosophy of science, measurement, and inductive logic showing their significance for all kinds of psychological research. Acquaintance with research design and tools. Prerequisite: Course 305 or equivalent.

502. Introduction to Clinical Psychology (3)  
Introduction to specific skills, knowledges, and techniques with initial clinical experience. Prerequisite: Course 416 or concurrent registration.

503. Experimental Psychology for Graduate Students (3)  
Discussion and demonstration of advanced experimental designs and procedures. Supervised laboratory experiences on problems of significance to the field. Prerequisite: Course 410 or equivalent.

505. Statistical Problems in Psychology (3)  
Applications of complex statistical concepts in the interpreting of psychological data. Complex correlations, tests of significance, and special statistical techniques. Prerequisite: Course 305 or equivalent.

510. Psychodiagnostics (3)  
Introduction to and rationale of various projective tests. Methods of administration and interpretation. Lecture and laboratory. Prerequisite: Course 502 or equivalent and consent of instructor.

511. Clinical Methods (3)  
Introduction to and rationale of various projective tests. Methods of administration and interpretation. Lecture and laboratory. Prerequisite: Course 502 or equivalent and consent of instructor.

512. Principles of Psychotherapy (3)  
Analysis of the various techniques and theories of psychotherapy and an evaluation of their respective effectiveness. Prerequisite: Course 502 or equivalent and consent of instructor.

513. Psychological Case Study (3)  
Techniques for compiling and interpreting a complete case study. Methods for determining clinical programs for therapeutic purposes. Prerequisite: Consent of instructor.

514. Practicum in Clinical Psychology (3)  
Application of clinical methodology in a clinical situation. Practice in diagnosis and initial supervised therapy of clinical cases. Open only to candidates for the master's degree in Psychology, with consent of instructor.

515. Psychology of Personality (3)  
The nature and development of personality with a critical study of modern interpretations and research. Recommended: Course 426 and an understanding of quantitative methods.

530. Contemporary Behavioral Theories (3)  
The theoretical contributions of psychologists publishing today. An examination of historical roots, main emphases, and merits of each theory. Prerequisite: Course 426 or 435.

531. Physiological Bases of Behavior (3)  
A detailed study of the behavior of the organism traceable to organic functioning. Prerequisite: A course in physiological psychology or a laboratory course in physiology.

532. Comparative Psychology (3)  
A critical examination of experimental studies using animals as subjects. A comparison of the behavior of the various species. Lecture and laboratory.
550. **Experimental Studies in Learning (3)**

Current experimental investigation of the basic learning processes. Examination of the nature of investigative problems, experimental procedures, and theoretical significances. Lecture and laboratory. Prerequisite: A course in learning.

551. **Experimental Studies in Perception (3)**

Investigations of perception with emphasis on the interrelationships of learning, motivation, and perception. Lecture and laboratory.

565. **Psychology of the Gifted (3)**

The adaptive problems of the gifted, including self-concept, attitude toward others, and meeting of special needs, with emphasis on research findings.

566. **Psychology of the Retarded (3)**

The characteristics of the retarded as they relate to his perceptions of self and others and as they affect his behavior, with emphasis on research findings.

567. **Psychology of Reading (3)**

The dynamics of reading as it relates to the adaptive behavior of the reader, including the problems of meaning, functional readiness, and individualization.

569. **Individual Intelligence Testing (3)**

Practice in administering and analyzing individual intelligence tests. Emphasis placed on Stanford-Binet and Wechsler Scales. Prerequisite: Measurement course and Course 465 or 502 or concurrent registration and consent of instructor.

599. **Thesis (3)**

The student is eligible to register for this course after he has completed Course 501 and has been accepted as a candidate for the master's degree by the Department of Psychology.
Social Sciences

Area majors involving the Social Sciences are described under Economics, Political Science, and Sociology and Anthropology.

The following course will be accepted for credit toward a major in Economics, Political Science, or Sociology:

Sociology and Anthropology 492. Social Science Research (3). Described under Sociology and Anthropology.

The following courses are offered for credit in History as well as in Economics, Political Science, and Sociology:

History 410. European Seminar (8). Described under History. Students who propose to take this course for credit toward a major must receive written permission from the head of their major department before enrolling.

Political Science 490. Materials and Problems of High School Instruction in the Social Sciences (2). Described under Political Science.

Political Science 491. Materials and Problems of Elementary School Instruction in the Social Sciences (2). Described under Political Science.
Department of Sociology and Anthropology

The Department of Sociology and Anthropology offers graduate courses and research opportunities leading to the degree Master of Arts and to the Certificate of Advanced Study. The Department also cooperates with other departments in offering an area major leading to the degree Master of Science in Education. Students desiring to pursue the graduate curriculum in Sociology are required to consult with the graduate adviser before being admitted to courses.

MASTER OF ARTS

Major in Sociology

Graduate work in this field is designed to prepare students for teaching and/or research in Sociology, for positions in public and private administration, and for further advanced study. Students who elect the master's program with a major in Sociology must have had at least 10 semester hours in Sociology and/or Anthropology. When this is lacking, they will be required to compensate during the graduate program.

Requirements are as follows: 18 semester hours in Sociology, including at least one course in theory, one course in research methods or statistics, and a thesis; 8 semester hours in a minor in a closely related field such as Economics, History, Political Science, Psychology, or Philosophy; 6 semester hours in electives in consultation with the faculty adviser. A final examination, based on a reading list prepared by the Department staff and available at the Department office (Watson 215), is required. An oral examination may be required at the option of the Department. Total for the degree, 32 semester hours.

MASTER OF SCIENCE IN EDUCATION

Area Major

The Department of Sociology and Anthropology cooperates with other departments in the University in offering an area major leading to the Master of Science in Education degree. Students who elect this program will be expected to complete at least half the work for the degree in Sociology. The program of courses will be selected in conference with the graduate adviser and will include at least one course in theory (470, 485, 580, 585, 686B) and one course in research methods (492, 686F). Students who elect to write their qualifying papers in Sociology may earn 2 to 4 semester hours credit for the paper by enrolling in Course 584, Independent Study.

CERTIFICATE OF ADVANCED STUDY

Major in Sociology

Prerequisite, master's degree. Candidates working toward the Certificate of Advanced Study in Sociology will plan a course of study designed especially to meet their needs. The course of study will then be presented to the advisory committee for its approval. The program may be concentrated entirely in Sociology, although a minor of 9 semester hours in a closely related field is acceptable. A comprehensive examination, either written or oral, or both, and a thesis are required. Total for the certificate, 30 semester hours.
Course Offerings

SOCIOLGY

400. Gerontology (2)
   The social problems of the aged and the aging. Prerequisite: Course 180 or equivalent.

470. History of Social Thought (3)
   Ancient and medieval philosophies leading to the development of modern sociological theory.

471. Probation and Parole (3)
   Early development, types of service, administrative organization, investigative and supervisory aspects of probation and parole within the legal structure of society. Prerequisite: Course 288.

480. Marriage and the Family (3)
   Nature and functions of the family in cross cultural perspective; courtship and marriage systems in the United States; the dynamics of pair interaction before and after marriage; influence of the family in individual growth and development; family crises. Prerequisite: Course 180 or equivalent.

481. Marriage and Family Counseling (3)
   To provide the student with the available information for his own needs as an individual, as well as to supply him the necessary aids for counseling in the secondary schools. Prerequisite: Course 480.

483. Social Disorganization (3)
   Culture patterns defined by society as undesirable; the sociology of pathological patterns associated with physical and mental ill-health and other patterns resulting in personal disorganization; frames of reference for analyzing social disorganization. Prerequisite: Course 180 or equivalent.

484. Intergroup Relations (3)
   Analysis and exposition of cultural and social-psychological influences underlying relations among racial, ethnic, and other minority and majority groups. Emphasis upon problems of prejudice and discrimination, and the promotion of harmonious intergroup relations. Prerequisite: Course 180 or equivalent.

485. Sociological Theory (3)
   Sociological theory as a body of unifying principles and as a guide for research. The significant contributions of outstanding sociologists past and present. Primarily for majors in Sociology.

487. Population Dynamics and Human Ecology (3)
   Population growth and distribution, age, sex, ethnic, and other characteristics; national and international migration; forecasts of population. Prerequisite: Course 180 or equivalent.

488. Juvenile Delinquency (3)
   Social and psychological factors in delinquent behavior; causation, prevention, and rehabilitation; the role of community agencies; the juvenile court. Visits to juvenile correctional agencies. Prerequisite: Courses 180, 288.

489. Social Stratification (3)
   Social class and caste systems, with special emphasis on American culture; indexes of social class; interaction among social classes; social mobility; relationship of class position to behavior in family, economic, religious, political, and other phases of social life. Prerequisite: Course 180 or equivalent.

492. Social Science Research (3)
   Principal methods of research in the social sciences; the planning and conduct of a research project; current techniques of collecting, analyzing, interpreting, and reporting data. Prerequisite: 6 semester hours in one of the social science fields.

495. Seminar in Current Problems (2-4)
   Issues and policies in government, politics, and economics in their historical and sociological perspectives.
580. Systematic Sociology (3)

The historic patterns of sociological thought as developed by Comte, Giddings, Cooley, Sumner, Thomas, and others, and an attempt to synthesize the current patterns of sociological thought into a coherent system. Prerequisite: Course 180 or equivalent.

581. Social Dynamics (3)

The constants of social change, the variability of rates of change, the factors involved from a sociological point of view in the various forms of revolution typified by the Industrial Revolution, the Protestant Reformation, and various political movements. Prerequisite: Course 180 or equivalent.

582. Social Attitudes (3)

The nature of social attitudes, their importance in modern society, their growth and development, their measurement, and their control. An advanced study of attitude-forming techniques in a special area will be required of the student. Prerequisite: Course 180 or equivalent.

583. Community Analysis (3)

Selected topics and studies in the structure and functioning of urban communities. Attention given to urbanization and other processes and factors associated. Prerequisite: Course 180 or equivalent.

584. Independent Study in Sociology (2)

Open to qualified students who wish to do individual advanced work in Sociology. May be repeated to a maximum of 4 semester hours credit. Prerequisite: Written permission of Department Head.

585. Theory of Criminology (3)

Historical and theoretical aspects of academic criminology. Contributions of the great individual thinkers with special emphasis on recognized schools of criminological theory.

586. Industrial Sociology (3)

Analysis of social roles and relationships within the occupational structure; formal and informal groups and organizations in industry; the relation of industrial organization to other aspects of the community. Prerequisite: 6 hours of social science or consent of instructor.

*670. Seminar in the Sociology of Religion (3)

Intensive study of selected aspects of religious behavior. Prerequisite: Course 386 or consent of instructor.

680. Thesis (6)

*686A. Seminar in Social Psychology (2 or 3)

Analysis of advanced topics in social psychology such as collective behavior, personality formation, and social control. Prerequisite: Course 315 or equivalent.

*686B. Seminar in Sociological Theory (2 or 3)

Intensive analysis of selected theories in sociology. Prerequisite: Course 485 or consent of instructor.

*686D. Seminar in Social Disorganization (2 or 3)

Intensive analysis of selected areas of disorganization such as inter-group conflict, divorce, war, and drug addiction. Prerequisite: Course 483 or consent of instructor.

*686E. Seminar in Marriage and Family (2 or 3)

Selected aspects of marriage and family behavior, institutional patterns, problems, and adjustment. The modern American family. Prerequisite: Course 480 or consent of instructor.

*686F. Seminar in Research Methodology and Techniques (2 or 3)

The scientific approach, selection of research problems, study design, methods of analysis, research techniques. Prerequisite: Course 492 or consent of instructor.

*Course may be repeated to a maximum of 6 semester hours credit.
420. Cultural Evolution (3)
A historical and critical examination of evolutionary theories of culture. Relationships between biological and cultural evolution. Prerequisite: Course 220.

421. Kinship and Social Structure (3)
Cross-cultural examination of social institutions with special attention to kinship in primitive and peasant societies. Functional requisites of various kinship systems and their development. Prerequisite: Course 220.

520. Cultural Systems (3)
Organizing principles and theories currently used in anthropology: culture areas; culture patterns; themes and models. Prerequisite: Course 220 or consent of instructor.

530. Special Problems in Anthropology (3)
Supervised readings and field work in special problem areas of anthropology. Prerequisite: Written permission of Department Head.

*620. Seminar in Cultural Anthropology (2 or 3)
Intensive study of special topics such as marriage and family, mythology, the arts, linguistics, acculturation, and ethnology. Prerequisite: Course 220 or equivalent.
At the present time the Department of Special Education does not offer a graduate major in any of the fields of Special Education. Students working in other areas of Education, who desire to select Special Education as an area of emphasis, may enroll in the Special Education course offerings for graduate credit. Students interested in this area must plan the area of emphasis with their major adviser and in consultation with the Head of the Department of Special Education.

Course Offerings

401. Special Education for Educable Mentally Handicapped Children (3)
For students who intend to qualify as special teachers of educable mentally handicapped children. Curricula, methods, materials of instruction, and evaluation. Prerequisite: Course 418, Psychology 415.

418. Education of Exceptional Children (3)
The special educative needs of exceptional children. Methods and programs designed to meet these special needs. Prerequisite: Consent of instructor.

430. Medical Aspects of Crippling Conditions (2)
Etiology, care and treatment of crippling conditions, and other types of special health problems. Prerequisite: Consent of instructor.

431. Special Education for Physically Handicapped Children (3)
For students who intend to qualify as special teachers of physically handicapped children. Curricula, methods, materials of instruction, and evaluation. Prerequisite: Courses 418, 430, Psychology 415.

440. Braille Reading and Writing (2)
Techniques of braille reading and writing, preparation of braille materials, and braille instructional procedures.

441. Special Education for Blind Children (3)
For students who intend to qualify as special teachers of blind children. curricula, methods, materials of instruction, and evaluation. Prerequisite: Course 418, Psychology 415.

450. Special Education for Partially Sighted Children (3)
For students who intend to qualify as special teachers of partially sighted children. Curricula, methods, materials of instruction, and evaluation. Prerequisite: Course 418, Psychology 415.

460. Special Education for Deaf and Partially Deaf Children (3)
For students who intend to qualify as special teachers of deaf and partially deaf children. Curricula, methods, materials of instruction, and evaluation. Prerequisite: Course 418, Psychology 415.

480. Psycho-educational Measurements of Exceptional Children (3)
To develop ability in the use and interpretation of educational and psychological tests. Practice is provided which emphasizes identification and problems of measurement of exceptional children. Prerequisite: Education 275.

481. Educational Diagnostics for Exceptional Children (3)
Diagnosis in the educational areas. Special attention is given to the basic tool subjects Development of case studies which involve the identification of specific problems and recommendations for corrective techniques. Prerequisite: Courses 480, 418, Psychology 415.

482. Guidance for the Exceptional Child (3)
The social and vocational guidance for exceptional children with local, state, and national resources. Emphasis is placed on the basic guidance techniques as they relate to a particular type of exceptionality. Special attention is directed to the problems of the educable mentally handicapped, physically handicapped, blind, partially sighted, deaf and partially deaf.
497. Student Teaching in Special Education (3-10)
Supervised teaching of children who are exceptional in the public schools or special institutions. Student teaching is offered in the following areas: Educable Mentally Handicapped, Physically Handicapped, Blind, Partially Sighted, Deaf and Partially Deaf. Prerequisite: Completion of professional education and related coursework or consent of head of the department. All students must satisfy the regulations governing student teaching.

499. Seminar in Special Education (3)
To review and analyze the research in Special Education in terms of the special interests of the students.
Department of Speech

The Department of Speech offers graduate programs leading to the degrees Master of Science in Education and Master of Arts and to the Certificate of Advanced Study.

The graduate program in Speech is adapted to the student's individual needs and academic background. When a student elects a major in Speech, he must consult with his adviser for the purpose of planning a graduate program.

MASTER OF SCIENCE IN EDUCATION

Students who elect a graduate major in Speech toward the degree Master of Science in Education must meet the following course requirements:

1. Approximately two-thirds of the graduate study program must be in courses offered by the Department of Speech.
2. A student may concentrate his graduate study in the area of Drama, Public Address, or Speech Pathology and Audiology. The student's adviser, however, will reserve the right to require courses in more than one area if the student's academic background is deficient in certain basic courses.
3. The seminar course in Speech, Course 591, will be required of all students. If the student's area of concentration is Drama, Course 410 will be required; if the student's area of concentration is Public Address, Course 593 will be required. Students who are majoring in Speech Pathology and Audiology will be expected to fulfill the state's requirements for certification as speech and hearing therapists.

Regardless of whether the student's area of concentration is Drama, Public Address, or Speech Pathology and Audiology, the departmental philosophy is that the student should demonstrate a fundamental knowledge of the entire field of Speech. The Department of Speech recommends, therefore, that the student elect at least one course from each area other than his major field of concentration. The suggested electives are: DRAMA: 430, 511, 514, 518; PUBLIC ADDRESS: 400, 503, 506, 608; SPEECH PATHOLOGY AND AUDIOLOGY: 424, 525, 530, 540.

MASTER OF ARTS

The Master of Arts degree may be earned with a concentration in Drama and Interpretation, in Public Address, or in Speech Pathology and Audiology, but the program of study must be approved by a committee of the Department.

A candidate seeking to qualify for the degree Master of Arts in Speech shall satisfy the following departmental requirements:

1. The student must earn a minimum of 32 graduate semester hours. At least 22 of these semester hours must be in courses offered by the Department of Speech. With the approval of the major adviser, the student may elect a maximum of 10 semester hours in allied studies.
2. The seminar course, Course 591, will be required of all students.
(3) The student must pass both oral and written examinations administered by a graduate faculty committee of the Department of Speech. These examinations will attempt to assess the candidate's ability in his individual field of study.

(4) Proficiency in reading a foreign language is recommended.

**CERTIFICATE OF ADVANCED STUDY**

The candidate for the Certificate of Advanced Study must arrange a program which meets the approval of the Department of Speech. The nature of the program will depend on the student's experience and academic background.

The candidate shall pass a basic reading proficiency examination in a foreign language.

**Course Offerings**

**DRAMA, ORAL INTERPRETATION OF LITERATURE, RADIO AND TELEVISION**

410. History of Theatre to 1650 (3)  
The origin of theatre as a social force and an artistic form, and its development to the middle of the 17th century. Relation of play to theatre, actor, and audience; to social, literary, and artistic interests in the Classical Greek and Roman, Elizabethan, and Neoclassical French Periods. Reading and analysis of theatre classics worthy of revival.

411. Directing (3)  
Basic principles of blocking, timing, control of focus, and other fundamentals of directing. Planning the interpretive concept of a production and reporting such plans in prompt book form. Problems of training and directing amateur actors. Procedures of supervising the production from casting to performance. Laboratory experience in directing scenes and one-act plays. Prerequisite: Consent of instructor.

430. Advanced Oral Interpretation of Literature (3)  
Summary of the literature concerning selecting, arranging, and presenting materials to be read orally. Practice in techniques of oral expression. Prerequisite: Consent of instructor.

450. Educational Radio and Television (2)  
The literature in the areas of radio and television programming with an analysis of their pedagogical applications. Composition and delivery of various types of programs and continuity. Four periods a week for first nine weeks.

509. History of Theatre, from 1650-1850 (3)  
The history of the theatre and its literature in Europe from the middle of the 17th century to the middle of the 19th century. Analysis of significant events and trends, including Restoration and 18th century England, German classicism, the emergence of the actor-manager, rise of bourgeois drama, and French romanticism.

510. History of Theatre, from 1850—the Present (3)  
The history of the theatre and its literature in Europe from the middle of the 19th century to the present. Analysis of significant events and trends, including the new modern drama, the rise of the director, the independent theatre movement, and the stylistic experiments of naturalism, realism, symbolism, and expressionism.

511. Advanced Directing (3)  
Advanced theory of stage direction in regard to composition, picturization, and movement. History of the development of the director as the controlling theatre artist. Special problems of directing the classics of dramatic history and experimental styles of drama. Students will undertake practical directing projects. Prerequisite: Course 411 or its equivalent.

512. Dramatic Theory (2)  
An analysis of the basic elements of the art of drama—dramatic action, characterization, and dialogue form—together with an historical consideration of how these elements functioned in the major forms and styles of drama.
513. Development of Modern American Theatre (3)
The development of the American theatre and drama in the 20th century.

514. Seminar in Advanced Acting (2)
Acting as an art form with emphasis on historical style as it concerns problems of period production. Research into the history of acting theory and acting practice. Individual and group laboratory assignments of acting roles from representative plays.

515. Seminar in Production and Technical Problems (3)
A summary of the historical, traditional, and artistic developments of theatre architecture and mechanics and their relationships to the major plays from Greeks to modern times. Practical experience in the technical operations of modern theatres. Prerequisite: Consent of instructor.

516. Voice and Diction in the Educational Theatre (2)
Training methods involved in the development of good stage speech and an effective stage voice, including a study of foreign and regional dialects for character impersonation. Prerequisite: Consent of instructor.

518. Advanced Projects in Scenic Design (3)
Special problems in period production related to the adaptation of historical plays to the modern theatre facility. Advanced individual projects to include the development of designer's sketches, elevations, floor plans, and models. Prerequisite: Consent of instructor.

519. Oral Interpretation in the Elementary and Junior High Schools (3)
Principles and methods of oral interpretation of literature, including storytelling and choral reading and educational dramatics adapted to the programs in the elementary and junior high schools. Prerequisite: Consent of instructor.

611. Educational Television Programming (3)
Preparation, presentation, and evaluation of educational television programs. Prerequisite: Consent of instructor.

612. Theatrical Criticism (3)
The major contributors to the arts of dramatic and theatrical criticism from the Greeks to the present day as they have influenced dramatic and theatrical practices.

613. Development of Early American Theatre (3)
The development of the American theatre and drama from the 17th century through the 19th century.

614. Playwriting (3)
The conventions and techniques that playwrights use to communicate in the theatre. Analysis of selected plays. Lectures and discussion combined with exercises in the planning and writing of scenes and short plays.

615. Seminar in Theatre Research (3)
An intensive investigation of a single significant dramatic form or theatrical phenomenon. The selection of each topic will be made on the basis of current research needs and will be announced prior to each semester. May be repeated to a maximum of 6 semester hours credit. Prerequisite: Consent of instructor.

PUBLIC ADDRESS

400. Introduction to Rhetorical Criticism (3)
Introduces the student to basic concepts, terminology, and methods of rhetorical criticism, both classical and modern, and emphasizes the historical continuity in the evolution of public speaking from the ancient Greeks to the present age.

401. Contemporary Public Address (3)
An application of the logical, historical, and aesthetic disciplines to the study of the speeches of representative spokesmen of 20th century thought.

402. Group Communication (2)
The nature of group processes. Leadership, communication, and decision-making problems in small groups.

500. Ancient and Medieval Rhetoric and Public Address (2)
The contributions of Plato, Aristotle, Cicero, Quintilian, Augustine, and others to rhetorical theory, and analysis of the speeches of some of the principal ancient and medieval orators. Prerequisite: Consent of instructor.
501. Critical Studies in Oratorical Theory (2)
The contributions of Bacon, Wilson, Campbell, Blair, John Quincy Adams, and others to rhetorical theory, with its adaptation to modern conditions. This course and Course 500 examine the theory of public speaking from the earliest times to the present. Prerequisite: Consent of instructor.

502. History and Criticism of British Public Address (3)
The application of the principles of rhetorical criticism in the study of the speeches of some of the principal 18th and 19th century British speakers. Prerequisite: Consent of instructor.

503. History and Criticism of American Public Address I (3)
Rhetorical criticism of the speeches of some of the principal American speakers in the period from colonial times to the close of the Civil War, including consideration of the historical setting of the speeches and an analysis of the ideas, structure, style, and presentation of the speeches. Prerequisite: Consent of instructor.

504. History and Criticism of American Public Address II (3)
Continuation of Course 503 with the focus on the speeches of some of the principal American speakers in the period from the close of the Civil War to the end of the 19th century. Prerequisite: Consent of instructor.

505. The Forensic Program (2)
The organization, direction, and evaluation of intra-school, community, and inter-school activities in debate, discussion, extempore speaking, and oratory. Prerequisite: Consent of instructor.

506. Advanced Public Speaking and Group Discussion (2)
For school administrators and teachers who are not specialists in speech but who, in the discharge of their professional and civic duties, are called upon to give various types of speeches, to lead group discussions, and to preside at meetings governed by parliamentary law. Prerequisite: Consent of instructor.

607. Seminar in Persuasion (3)
Survey of the literature and research in the field of persuasion with special reference to the analysis of theories and techniques of obtaining attention and motivation in oral advocacy. Prerequisite: Consent of instructor.

608. Language in Oral Discourse (3)
An approach to the problems in the use of symbols of thought and attitude in speech. Consideration of recent contributions in the fields of linguistics, and notably semantics, the impact of semantics on logic, and the psychology of speech. Prerequisite: Consent of instructor.

SPEECH PATHOLOGY AND AUDIOLOGY

420. Hearing Problems and Audiometric Methods (3) I, Summer
An introduction to clinical audiology: etiology, diagnosis and rehabilitation of auditory disorders. Observation and orientation in hearing testing.

421. Aural Rehabilitation (3) II
Methods and materials of speech reading, auditory training, hearing aids, and speech conservation for the hard-of-hearing. Observation and presentation of sample lessons. Prerequisite: Course 420.

422. Clinical Methods in Speech Pathology (3) I
Therapeutic procedures for the correction of speech defective children in the public school. Problems of surveying, scheduling, and administering a public school speech correction program. Six periods a week for first nine weeks. Prerequisite: Consent of instructor.

424. Stuttering (3) II
Modern theories of stuttering. An overview of etiological and concomitant factors in stuttering with emphasis on basic therapy procedures for stuttering children and adults.

425. Organic Disorders of Speech (3) II
Causes, symptoms, and speech therapy procedures for cleft palate, cerebral palsy, postlaryngectomy speech, aphasia, and other language disabilities.

426. Assessment of Hearing (3) II
A lecture laboratory course in the standard audiometric battery, special tests of auditory function, and their evaluation and interpretation. Clinical practice in hearing testing. Prerequisite: Course 420 and consent of instructor.
427. Clinical Practice in Speech Pathology (1-3)  I, II, Summer
Supervised clinical practice in the University Clinic, Out-Patient Diagnostic and Therapy Clinic, and/or the Summer Speech Center. Forty-five clock hours of clinical practice for a semester hour of credit. May be repeated to a maximum of 3 semester hours credit. Prerequisite: Consent of instructor.

428. Clinical Practice in Audiology (1-3)  I, II, Summer
Hearing testing, aural rehabilitation and conservation of speech in the University Speech and Hearing Clinic, Summer Speech and Hearing Center, or other clinical opportunities. May be repeated to a maximum of 3 semester hours credit. Prerequisite: Consent of instructor.

525. Speech Science (3)
The acoustical, physiological, and psychological foundations of oral communication; laboratory experimentation. Prerequisite: Consent of instructor.

530. Speech Handicaps (3)  I, II, Summer
A theoretical consideration of classification, etiologies, and symptomatologies of speech problems among children and adults with special attention to rehabilitative procedures; clinical observation.

531. Seminar in Voice and Articulation Disorders (3)
Current research findings in the etiology, diagnosis, and therapy of voice and articulation problems. Prerequisite: Consent of instructor.

532. Clinical Measurement in Speech Pathology (3)
Principles and methods of assessing the significant parameters of normal and defective speech with particular emphasis upon measurement and statistical procedures; laboratory experimentation. Prerequisite: Consent of instructor.

540. Seminar in Audiologic Assessment (3)  Summer
Recruitment, non-organic hearing loss, and/or other specialized considerations in the functioning of the auditory system. May be repeated for credit. Prerequisite: Courses 420, 426, and consent of instructor.

541. Seminar in Aural Rehabilitation (3)
Speech reading, auditory training, hearing aids, and/or speech conservation for the hard-of-hearing. May be repeated for credit. Prerequisite: Courses 420, 421, and consent of instructor.

544. Seminar in Stuttering (3)
Advanced study of the stuttering complex, including an intensive investigation of research with particular emphasis upon theories of behavior and their application to the stuttering problem; clinical practicum. Prerequisite: Consent of instructor.

545. Seminar in Organic Disorders of Speech (3)
Special problems of diagnosis and therapy of speech and language handicaps associated with cleft palate, cerebral palsy, post-laryngectomy speech, aphasia, and related problems. Emphasis on current research findings. Prerequisite: Consent of instructor.

546. Audition (3)
Acoustics, psychophysical methods, and the measurement of the normal ear's response to sound. Prerequisite: Consent of instructor.

632. Experimental Design (3)
A survey of research problems and procedures in speech pathology and audiology with considerations of treatments and analyses of experimental data. Prerequisite: Consent of instructor.

SPEECH EDUCATION

440. The Teaching of Speech (3)  I
The problems confronting the teacher of speech. Lectures and collateral reading on the following major subjects: the organization, content, and methods of teaching the foundation course in speech and other courses in a balanced speech curriculum. Six periods a week for first nine weeks.

590. Oral Communication for Teachers (4)
Principles and methods of communication applied in oral reports, in lecture-demonstrations, in group discussion, and in book reviews as employed in the curricula of junior and senior high schools. Prerequisite: Consent of instructor.
591. Seminar in Speech (3)
An overview of history and contemporary philosophy in the field of speech with special reference to the cooperative interaction of audiology, dramatics, public address, and speech pathology, and their mutual contributions to the humanities and the sciences. Prerequisite: Consent of instructor.

592. Seminar in Oral Interpretation in Senior High School (3)
A summary and critical analysis of literature concerning oral interpretation on the senior high school level. Considerations in the planning of a high school program. Prerequisite Consent of instructor.

593. Seminar in Problems in the Teaching of Public Speaking, Discussion, and Debate (2-3)
An exploration of the problems and the findings of research in these areas of speech education. Prerequisite: Consent of instructor.

599. Directed Individual Study I (1-3)
Independent study of problems in any area of speech: speech pathology, interpretation, radio and television, public address, speech education, audiology, and related fields. Open only to candidates for the master's degree. May be repeated to a maximum of 5 semester hours credit. Prerequisite: Consent of instructor.

699. Directed Individual Study II (1-5)
Independent pursuit of advanced problems in speech of special concern to qualified graduate students. Open only to candidates enrolled in the sixth-year program. May be repeated to a maximum of 5 semester hours credit. Prerequisite: Consent of instructor.

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